

Leveraging CBDCs for Promoting Financial Inclusion – English Transcript

(Note: This transcript was AI-generated using [NoteGPT](#). Transcripts may include inconsistencies or errors and some sentences have been condensed.)

00:15

Hey everyone, I'm Babak Abbaszadeh, the CEO of Toronto Center. Welcome to our panel on using CBDCs, or Central Bank Digital Currencies, to boost financial inclusion. We're hosting this as part of Financial Inclusion Week, and we really appreciate the Center for Financial Inclusion for their ongoing work in this area. Since we started back in 1998, Toronto Center has trained over 28,000 financial supervisors from 190 countries.

00:51

We're working on building more stable, resilient, and inclusive financial systems. Our mission is backed by Global Affairs Canada, the IMF, and other important international partners. The World Bank group also helped start the Toronto Center. Financial stability and inclusion often seem like separate goals, but they're actually connected. The IMF points out that if we expand access to credit without proper oversight, it can raise risks to financial stability.

01:25

We believe that putting money into good supervision and improving financial literacy can really pay off as financial inclusion grows. That's why we're focused on this topic—it's a key part of our long-term country risk-based supervision programs. On a global scale, financial inclusion has picked up speed thanks to tech advances, but there are still challenges like regulatory hurdles, a lack of financial literacy, cultural attitudes towards financial services, and of course, the big elephant in the room: cyber risk.

02:02

Inclusion needs a well-rounded approach that brings together governments, financial regulators, banks, and others to create an environment that empowers people and supports sustainable economic growth. Today, we're excited to have a fantastic panel made up of experts in financial regulation and related fields. They'll talk about the latest developments in digital finance, especially how we can use central bank digital currencies to boost financial inclusion. Each of them has valuable insights to share.

02:37

"Our organization partners with them on some projects. We've trained them in certain areas, and they collaborate with us. So, Natalie Haynes is the Deputy Governor of the Bank of Jamaica, and Jon Frost is the head of Economics for the Americas at the Bank for International Settlements (BIS). Haocong Ren is the lead policy and investment official at the Consultative Group. This conversation was supposed to be moderated by our colleague Dong He, the Deputy Director at the IMF, but he's having some connectivity issues right now."

03:15

"I'm going to jump in for a bit and put you through my moderating skills until he gets back. I'm really happy to have the speakers here. Hi everyone, welcome to the panel! Your bios have already been shared, so I won't read them out loud. Let's get back to the first question. Just so you know, this is all a bit spontaneous for me, so bear with me and show some mercy!"

03:45

"Let's kick things off with a really interesting question for Jon. Jon, we're going to chat about financial inclusion. Could you give us a quick rundown on what a CBDC is? Also, what do you think the main strategy for central banks should be to build public confidence and trust in CBDCs going forward? You've got five minutes. Thanks! Alright, thanks a lot, Bak. So, to start, let me give a formal definition so we're all clear. The BIS usually defines CBDCs as a type of..."

04:17

Digital money that's tied to the national currency and directly backed by the Central Bank. So, CBDCs are a kind of central bank money, similar to cash—like bills and coins—but in digital form. For consumers, they feel a lot like bank deposits, but the key difference is that you're holding a liability of the Central Bank instead of a private bank or financial institution. There are definitely some advantages to rolling out CBDCs.

04:51

"Today, we're going to focus on some of the benefits of financial inclusion. Other things central banks are aiming for include better payment system efficiency, safety, resilience, and even financial stability. You asked about how to build public confidence and trust in future central bank digital currencies (CBDCs), and I think that's super important. Public confidence and trust are crucial in everything central banks do."

05:25

"We need to make sure that, as part of our public duty, we're helping keep prices stable and the national currency's value steady. These things shouldn't be overlooked. Generally, in most countries, people trust central banks to safeguard the currency and keep the financial system stable. Central banks have made a lot of progress in recent decades to achieve this, but we all know that trust takes a long time to build and can be lost in an instant."

05:53

You know, central banks can really mess up when it comes to trust. That's why I think they have a solid reason to issue CBDCs. The reasons for doing so vary from country to country since each one has its own quirks. In some places, the monetary system struggles with competition and efficiency, while in others, it's more about access. But overall, issuing CBDCs fits well with what central banks are supposed to do regarding payment system efficiency.

06:25

Financial stability and often financial inclusion are key goals, and just like with central bank-run systems like fast payment networks and RTGS, central banks are either issuing or looking into CBDCs according to their specific goals. There are plenty of measures we can discuss, and I think Natalie will share some practical examples of what they're doing in Jamaica. Haocong can also chime in about some of the things happening.

06:54

They're talking about this in different places, but I think there are some good practices overall. Central banks really need to be clear about what issues they're trying to tackle with CBDCs. Is it mainly about financial inclusion, reducing payment costs, or providing new features for users? They just need to consistently communicate the goals of the project and ensure they follow through on what they promise.

07:23

"With those conditions met, I believe they have a solid foundation to build trust in the monetary and financial system. Thanks a lot for that detailed answer, Jon, and you managed to do it in just three minutes! You've set a high standard for Natalie and Jon to give concise answers. I'm also glad to see our colleague Dong He from the IMF here. As I mentioned, the IMF is a partner of the Toronto Center, and I was just..."

07:54

"Hey, are you ready to jump in? Can you hear me? Yes? You can't see me, right? We can see and hear you. Okay, thanks! Sorry about the tech issues. No problem! Are you good to go?"

Do you want me to ask one more question before you take over, or should I just hand it off to you now? I can take it from here if you want. Alright, so we're in the first round now."

08:23

Jon wrapped up his answer, and now we're moving on to Hay's question about how CBDCs can boost financial inclusion. If you want to kick that off, I just want to say thanks, Namaste, and I'll step back now. Thanks a lot! Sorry again for the tech issues, but I was really looking forward to this chat and seeing Jon, Haocong, and Deputy Governor Natalie on the call. I think, you know, this...

08:58

This topic has been talked about a lot, so let's jump right into it. Haocong, how do you think CBDCs can help with financial inclusion? What makes CBDCs different from other digital payment methods? We'd really love to hear your thoughts. Thanks, Haocong, and great to see you, Dong. Let me rephrase the question a bit. Back in 2021, a colleague of mine at the CAB wrote a blog post asking if financial inclusion is a reason to promote CBDCs. And the reason is...

09:39

Retail CBDC is being talked about as a way to boost financial inclusion. So, we're basically asking what CBDC can do that current payment methods can't, especially regarding access, efficiency, and costs. On the flip side, we're also looking at the challenges with the current systems that policymakers should think about when considering CBDC. Fast forward to last week, we had our...

10:18

The whole policy team had a retreat where we talked about the latest BIS working paper by Kon and Nilani. We see the potential in technology, especially with blockchain and tokenization, and how tokenized money is a key part of that big vision. It's a really compelling idea. So, we asked ourselves if our perspective has changed since the blog we published three years ago. Let me try to explain.

11:03

A more nuanced perspective is needed here, looking at the policy goals that Jon mentioned. Specifically, we need to think about what the policymakers are trying to tackle and what problems they want to solve with CBDC. It's also important to consider the current payment landscape, including existing infrastructure, financial instruments, market players, and market dynamics. So the first question to ask is: can a retail CBDC be widely

accessible without needing an account? We're referring to the more recent experiments on this topic.

11:44

Natalie will add to this in a bit. We're really focusing on promoting financial inclusion, especially with retail CBDCs. We're aiming for more of a two-tier system where financial service providers and other market players act as intermediaries. So, the big question is which financial service providers will be able to open wallets and what the onboarding requirements will be, like ID and KYC rules.

12:27

The second question is, can retail CBDCs be widely distributed, accessible, and accepted for different use cases? If you check out the latest GSMA report on the state of the mobile money industry, you'll find that only 5% of mobile money in circulation is used for retail payments, while a whopping 40% is for cash in and cash out transactions. This basically shows that there's still a strong preference for cash.

13:11

"Especially for retail transactions, that's another thing to think about when it comes to acceptance. There are different players involved, including economic incentives and their business models. The last question is whether a retail CBDC would be cheaper as a new tool and where it fits in. Jon pointed out that there's a public infrastructure side to this, which is a good point, and it could be offered at a relatively low cost, but that doesn't mean there's..."

13:53

There's no maintenance cost for development, and I also mentioned that there are different financial intermediaries involved. So, what are the economic incentives and business models for them? Lastly, we have to consider the existing infrastructure and the market players. There are various cost structures at play, along with competition from both the public and private sectors. A lot of policy issues and market dynamics are at work here. I'll stop there because I know Natalie will cover this in more detail.

14:25

The potential of CBDCs is something we can really explore, and I can get back to that later. Thanks, Haocong. So, let's move on to Deputy Governor Natalie Haynes. Jamaica, as you know, is one of the three countries that has launched a live CBDC. You introduced Jam-Dex

about two years ago. How has that experience been for you, especially in terms of financial inclusion? What steps are you taking to make sure that the CBDC is designed effectively?

15:05

"We need to make it attractive for people who can't access traditional financial services. If financial inclusion is a goal, how do we make CBDCs appealing to them? What steps have you taken to ensure that those who are financially excluded can access it? We're eager to hear your thoughts, thanks. Alright, thank you, Dong. Good afternoon, everyone, it's afternoon here in Jamaica. Hello to all our listeners and viewers, and to my fellow panelists. So, one of the goals of implementing..."

15:43

I'm gonna use the word "jamex" in Jamaica, which is about financial inclusion. We had other goals too, like making payment systems more efficient, improving interoperability, and reducing cash handling costs. Plus, it ties into the government's digital transformation for the whole economy—that's what we contributed. Now, I'm gonna focus on the financial inclusion part. Just to give you some quick stats, about 70% of the population in Jamaica is unbanked, so we're addressing that.

16:22

"30% of people are unbanked in Jamaica, but 113% mobile penetration means that even if someone doesn't have a bank account, many have one, two, or even three smartphones. So, with that in mind, how do we reach the unbanked and vulnerable? We expand the range of financial entities that can provide wallets by offering wallets directly to individuals. It's a combination of wholesale and retail strategies."

17:01

We've got regular banks, but there's also this other group called payment service providers. They're trying out payment products in our regulatory sandbox and can offer Jam decks for the central bank. This means people without bank accounts can access Jamex through these providers, so you don't need a bank account to use Jamex. We consider Jamex a low KYC product because we're always aware of the AML safety concerns.

17:39

No matter what we do, changes to our AML laws have made it possible for products with low KYC requirements to exist. Now, people can access these services not just through banks but also through various payment service providers. With everyone having smartphones and the government supporting free Wi-Fi access throughout the country, I

think we're nearly at full coverage everywhere. We actually tested this out a couple of years ago, and it worked well.

18:20

A while back, we set up a Christmas work program where people were hired to clean up the streets for the holidays. We tried paying them in Jamex, and we ended up spending about \$5,000. Those folks were able to use Jamex at local small businesses in their neighborhoods, so we considered that a success. Thanks a lot for sharing that info! Maybe we can kick off another round of discussions. Let me circle back to...

18:59

"Jon and I will get back to you a little later. So, Jon, we've been discussing policy goals, which are super important when it comes to investing in complex projects like CBDCs. What other challenges do you think we might face in implementing this, based on the BIS research and the experiments we've seen at different central banks?"

19:36

We discussed the two-tier operating model, focusing on how to encourage the distribution of CBDC and get merchants and consumers onboard. In payments, we have this two-sided market situation. Consumers likely won't want to use CBDC if merchants aren't accepting it, and vice versa—merchants will only want to accept CBDC if consumers are actually using it. It's kind of a classic chicken-and-egg problem that we really need to figure out.

20:12

"Implementing new payment systems, so what do you think are the key challenges with CBDCs that policymakers really need to focus on, especially regarding financial inclusion? Thanks. Right, thanks, Dong. Absolutely. As Dong pointed out, we've done some research on this at the BIS, and we actually collaborated with our colleagues from the World Bank. This includes the author of the blog that Haocong mentioned earlier about CBDCs."

20:48

"Financial inclusion, so whether CBDCs are a new tool in that area, I'd be glad to share the link to our discussion about it in the chat. We talked about the specific opportunities and challenges around financial inclusion that CBDCs could help with, like the high cost of payments in some places and the heavy KYC requirements. We definitely believe that CBDCs provide a new way to tackle these particular issues."

21:19

"These can really vary a lot depending on the area, but like Natalie said, in a lot of countries, people use their phones way more than they have bank accounts. So, there are some real chances to do something about that, like having different levels of KYC and making access cheaper, which could be super useful in remote places, like on islands or in rural areas. We're showing that there are certain design features of CBDCs that can help with this."

21:51

"That can really help tackle some of these specific barriers, which vary a lot by country. Dong's question also highlighted that there are challenges and operational risks. There are issues related to distributing, securing, and redeeming a CBDC within the banking system, plus factors that affect how people adopt it and what incentives encourage that adoption. All of this is important too. I also wanted to mention another piece of research we've done."

22:18

This is about how different central banks in the Americas are working together. We've specifically focused on CBDC information security and operational risks. There's a report that came out in November 2023, and you can check it out on our website; I'll share the link. The report highlights that CBDCs can really impact how the issuing central banks operate and the risks they deal with, which depend on several factors.

22:46

The report talks about how the central bank's specific design choices are influenced by various internal and external factors. It suggests an integrated risk management framework that covers the whole life cycle of a CBDC, from research and design to implementation and operation. It goes over the implications of different design decisions the central bank has to make and recommends some tools and processes to spot and reduce the risks that a CBDC might bring.

23:15

So, here's a specific example: a lot of central banks are really concerned about information security. They're worried that sensitive transaction data collected for CBDC services could be leaked and used against users. There are various ways to handle this, but one promising approach that's been tried in the Bahamas, and I think also in Jamaica, is to separate identity.

23:45

Here's the deal: by using transaction info, you can find out if there's been a data breach, which helps limit how much data could be at risk. I think some of these strategies look pretty promising—they can really help manage risks and make sure that CBDCs (central bank digital currencies) achieve their goals. It's all about keeping consumer trust and making sure every step of the CBDC transaction process is secure.

24:18

Just so you know, the system is working like it should. I just want to point out that a lot of the risks we understand come from real-world experience. With payment systems, we know things can go sideways, but there might be unique issues with CBDCs. The only way we'll really know is by seeing how it plays out in real life. Also, we need to put risk management strategies to the test in practice. So, I think that's important.

24:44

You know, the work happening in Jamaica, the Bahamas, the Eastern Caribbean, China, and Nigeria is super valuable. These central banks are really leading the way, getting insights that aren't just useful for themselves but for other central banks too. I think there's a lot we can learn from their experiences and see what we can copy in other places. So, I'll stop there and hand it back to you, Don. Thanks!

25:08

Thanks, Jon. I think you mentioned some specific design features that really help with financial inclusion, and those need to be thought out carefully. Moving on, how do you think central banks should tackle the decision on CBDCs? What design and governance aspects should they keep in mind if financial inclusion is a key goal?

25:49

Alright, let me break down what Jon already mentioned. When it comes to making decisions, there are a few layers to consider. First up, we have the policy objectives we've talked about. Next, we need to think about the legal and regulatory aspects—like what the legal status of CBDC is and whether the central bank has the authority and mandate to proceed, as well as any necessary legislative changes. Then, there are design features and governance issues to sort out, including how to manage risks, and of course, CBDC itself.

26:27

I talked a lot in the last round about the current challenges that CBDCs might face, but they also have a lot of potential. Being backed by a central bank means they can settle transactions instantly and securely. Plus, with smart contracts, we can automate various

use cases, whether it's government-to-business, government-to-person, or business-to-business. And we should also consider the possibility of offline capabilities when we discuss this further.

27:12

"Especially when it comes to financial inclusion, it's tough to reach areas where digital connectivity is limited, and in a lot of countries, even having reliable electricity can be an issue. So, there are a bunch of features and interoperability, which is by design, that go beyond the limits of private networks. There's a ton of potential to explore. Also, Jon already brought up the operational risks, including cybersecurity, as well as integrity risks and data protection."

27:46

Let's circle back to the privacy risks later, but for now, I want to share some thoughts on how CBDC design can help with financial inclusion. As mentioned earlier, we really want to make access easy. This includes having a straightforward onboarding process with tiered customer due diligence so that users can get in easily. We also want to make sure...

28:27

So basically, we're talking about a big network of financial service providers and agents to help onboard merchants and reach the end users. There are also some interoperability challenges because we'll be in a situation where different payment methods like cash, electronic instruments, and retail CBDCs will be around for some time in many countries, including those that have already launched.

29:10

Making sure everything works together in the current system is really important. I talked about the offline capabilities, which are built in thanks to some specific tech features. We can dive into that more later. Lastly, we need to balance keeping data safe and protecting privacy. There are various tech advancements and design options we can look into, like having some limitations.

29:55

"There's some uncertainty, and then whether there's a certain limit. Also, there's new tech for privacy, like blind signatures, among other options. The last thing I want to mention is super important: based on experience, it's crucial to have both private and public consultations early on. We're really talking about how things get distributed, adopted, and accepted, so it's vital for policymakers to have those discussions early."

30:37

"Taking a look at the current market situation, including the service providers and e-money providers, we need to understand their business models, liabilities, and economic incentives. I think this is really crucial for making our efforts successful if we want to improve financial inclusion. I'll stop there and pass it over to you. Thanks! I'm sure we'll circle back to discuss some of these points in more detail later. Now, let's hear from Deputy Governor Natalie."

31:18

So, Natalie, a lot of central banks really have to think about their resource limitations when deciding how much to look into CBDCs. Over time, they need to figure out how to handle those resource and capacity challenges. It's not just about the initial setup costs for the systems, but also the ongoing operational expenses. In your experience with launching Jam Dax two years ago, how have you approached this?

31:58

There are a lot of resource costs to think about before launching, right? You've done a ton of research beforehand. After launching, how do you feel about those resource costs? I think sharing your experience could really help other central banks when they're figuring out when and how to launch a CBDC. Can you share some thoughts on this? Thanks again! So, about the resources, I'm going to take a closer look at that.

32:37

We gathered a team from different parts of the bank to make sure our launch was successful and that we could keep that success going. There was a solid governance structure for implementing CBDC in Jamaica, which was backed by our Minister of Finance and the governor. The governor and I sit on an oversight committee together.

33:14

"Our senior Deputy Governor, our legal person, and our Chief Information Officer are involved, and then it goes to a steering committee, which funnels down to a technical committee that makes all the policy decisions and implements them. There's a team of dedicated staff focused solely on the technical side of CBDC, and that really helped us launch quickly, taking us from the early stages to when we had our pilot."

33:51

So, on the human side, we still have dedicated resources for that. The financial side was a bit trickier. When we first launched Jamex, it was meant to replace cash. There were costs

involved, like the Bank of Jamaica funding the hardware for managing the currency—minting, issuing, redeeming, and even destroying it if needed. We had to cover the costs for that hardware and the monthly maintenance for the tech provider.

34:26

Over time, that would have been a cost we had, but Jamex has changed a lot since we started. One piece of advice I'd give to central banks is to be really flexible and ready to adapt to changing demands. You won't be able to stick to your original plan because things are going to keep changing, and you need to adjust accordingly. At first, we focused on replacing cash due to its high costs, and the main payment method we noticed was people using their phones for PTP transactions.

35:07

The phone situation has changed; now in Jamaica, people prefer not to use phones and want to use Jamex through their point of sale systems. So, we had to bring in a tech provider to develop a solution for using Jamex at these machines. The Central Bank funded that. Then the government told us they wanted Jamex to be a key payment option for online tax transactions.

35:49

Right now, we're testing that out, so we had to cover the costs for setting it up and everything needed to get it online for the government. It's turned into more than just a phone-to-phone payment system; it's becoming a major retail payment option. Another issue we've faced is with the banks. Even though we gave them plenty of notice, most of them couldn't justify the costs to their shareholders and boards because they're private companies. So now, we're working on sharing the costs with the wallet providers.

36:32

They plan to take care of any hardware needed while these groups will actually fund the distribution of Jam Deck throughout Jamaica. They'll cover that, and then we'll have to split the cost of updating the point-of-sale machines to accept Jamex. Most importantly, marketing and communication are key to getting people on board, so the Central Bank plays a crucial role in this. Honestly, I've seen my team and I become pros at communication and marketing, even though that's not really our area.

37:09

We've had to shift our approach to make sure Jamex succeeds in adapting to the constantly changing needs. So, thanks, Natalie, that was really insightful. I appreciate you sharing

these lessons. One thing I take away from this is that cash can be pretty pricey. But hopefully, as CBDCs become more widespread and adoption increases, the overall cost of providing this payment method will actually decrease for central banks in the long run. But for now...

37:49

In the short term, that might not happen, so you know there will be some financial consequences. Also, you mentioned that CBDCs are a new thing for central banks. It's all about creating a product that people actually want. Usually, central banks think more about policy, so making something appealing to everyday citizens is a whole new ballgame, and there's a lot to figure out there.

38:21

There are a bunch of new challenges here, which is super interesting. I think these are really valuable lessons for other central banks. So, let's open it up for questions from the audience. I'd be happy to pick some for the panelists to answer. I'm not exactly sure how I'll get the questions, though, technically speaking. Oh, I see one for me in the chat. Okay, go ahead! Yes, I'm going to read... I think I'm not... oh, Marcel, right? So the...

39:03

The question is about balancing user privacy, scalability, interoperability, and adoption. Which do you think is the biggest challenge? For me, the biggest challenge is adoption—not just from consumers, but also from banks getting on board. We need more widespread adoption. Right now, out of about 10 to 14 eligible entities, only one is fully set up, and three others are still working on their wallets. Plus, none of the major commercial banks are involved yet.

39:49

"We need to get all the banks on board, or else we're going to face some serious issues. That's why we're shifting our focus to C sharing, to figure out how to get them involved. Thanks, Natalie. So, recently, as many of you know, the IMF has put together a virtual handbook on CBDCs. There are 11 chapters ready, and some of them will officially launch during the annual meetings next week."

40:28

So, basically, it's about adoption. I think a lot of these topics are covered in detail in that fintech note, which is about a strategy to promote and manage CBDC adoption. It takes a lot of work—not just education and marketing, but also looking at regulations and

incentives for service providers. All those points are talked about there. What you just shared, Natalie, is super important. Any other questions from anyone?

41:09

While we wait for questions from the audience, Jon, can I turn to you? I know you've been doing a lot of work with your colleagues at the BIS on how we can use the digital trail and the data we've collected in the digital age for credit scoring and financial inclusion. Financial inclusion isn't just about payments, of course. We're hoping that with new payment methods like CBDCs...

41:54

"These options are really appealing for people who don't have access to traditional banking. They could be a way for them to get into the financial system. For instance, if we start noticing how they handle their payments, that info is super valuable for service providers. You know, if someone is a good payer and pays on time, it gives a good idea of their creditworthiness as potential borrowers. So, maybe you can help out with that."

42:35

"Yeah, so when it comes to how CBDCs fit into this research, it's super important to highlight that financial inclusion isn't just about making payments. Sure, we definitely need to get more people using digital payments, and there's a big chunk of the population that doesn't have that access. But beyond just payments, we really want people to be able to access things like credit, insurance, savings, and building wealth."

43:02

Managing products and all that stuff is really important, and I think there are some chances for CBDCs to help out in those areas too. We've been chatting with a bunch of central banks to get their take on it. You brought up a key point about how the transaction data from a CBDC wallet can be super helpful, like when it comes to getting credit. This is true for consumers, but it can also benefit businesses if they have that digital data trail.

43:35

They can prove they have a steady income by consistently paying their rent or other bills on time. That kind of track record shows that a person or a business is trustworthy when it comes to credit. This can help them get affordable loans for productive investments. However, it's really important that if we want to go down that path, the user should have control over their data. They need to be able to access their data history through their CBDC wallet.

44:07

I should be able to go to credit providers and say I want to share my data with you so I can get a credit offer. They shouldn't have to share my data if they don't want to; it should really be up to each individual. I think this can be done really well with CBDCs, and it can also work through open banking or other options. But CBDCs let us build these features from the ground up and give users more control.

44:33

"From the start, their data could be super valuable, and I believe central banks are in a great spot to create systems like this. After all, central banks are here to serve the public and have a public mandate. They're not out to make a profit or sell data. They have no commercial interest in it, so I think they can build trustworthy systems that the private sector might not be motivated to create."

44:56

To expand on that, I think there's a conversation happening about tokenization and the programmable features of central bank digital currencies (CBDCs). This can be relevant for both retail and wholesale CBDCs. For example, in Brazil, the central bank is working on a wholesale CBDC that will also support retail services. It's clear that some of the programmable features and new functionalities that the wholesale CBDC could provide would really streamline certain processes.

45:26

"Being efficient could mean cheaper credit for small businesses and faster insurance claims. The Central Bank of Brazil has made it clear that their wholesale CBDC, the digital real, aims to promote financial inclusion beyond just payments. They already have a successful fast payment system called Pix that helps with financial inclusion in payments, but the digital real can improve financial inclusion in other areas too."

45:57

"That's a really valuable experience. I'm sure in Jamaica, people are also thinking about how the Jamex could help with financial inclusion in other areas. This is definitely a new space with plenty of opportunities, but there's still a lot of research and experimentation needed to figure out how it can work in real life. Thanks, Jon, that's a really important point. Also, in the fund, there's one of the chapters in the handbook."

46:29

We're discussing CBDC data usage and privacy protection. How do we balance tapping into the economic value of the data while ensuring strong privacy protection? There are different ways to achieve this. Of course, having strict institutional requirements is crucial, but we can also use technology—like privacy-enhancing techniques—when designing CBDCs.

47:04

Some of these issues are being looked into pretty closely, so I'm not sure if there are any other common questions. Oh, wait, there is one: How can central banks manage this intermediation risk? That's definitely a hot topic. Any thoughts from the panel? I can jump in here. For us in Jamaica, our monetary policy goals are focused on targeting inflation. That's what guides our monetary policy, and we're trying to avoid certain pitfalls.

47:50

We're using regular channels for transactions, which is why we rely on commercial banks to distribute cash. Basically, CBDCs work like physical cash; we issue it to the banks, and they give it out to the public. It's pretty much the same deal with CBDCs. Sure, we have a few other payment service providers, but they're regulated, so we can access their data when needed.

48:27

"How interest rates affect inflation is important, and those handling CBDCs are already regulated by the Central Bank. My advice to the Central Bank is to steer clear of issuing retail CBDCs. If the Central Bank starts providing wallets, it's going to lead to a ton of issues. We've looked into this and decided it's not the way to go, not just from a financial standpoint but also considering AML safety."

49:07

"From the Central Bank's perspective on risk, do you have any more thoughts, Haocong? I think Natalie already brought up the two-tier system that many central banks are exploring in the retail CBDC space. There are definitely some limits, like how much you can hold and the conversion from deposits to retail CBDC. It seems like there's a lot more clarity on this topic now."

49:50

From a policy and risk standpoint, there have been some key takeaways. When it comes to retail CBDCs, questions arise about whether they will earn interest and how to set that remuneration. I'll stop here—thanks! I think it's important to note that competitive pressure

in some banking systems isn't really a factor, you know? We're aware that some banking systems operate differently.

50:30

"You might actually gain something from a bit more competition, like with CBDCs. So, it's not necessarily a bad thing for financial stability. I guess it really depends on how the banking system is set up in the first place. Not sure if you have anything else to add, Jon? For sure, I totally agree with what Natalie and Haocong just said, but I think there's another point that comes up a lot."

51:00

The risk of going digital isn't just about how it might change the banking system, like cutting out middlemen and reducing the money available for loans. It's also about whether this could happen suddenly during tough times. For instance, in a lot of places, you can transfer your money out of a bank with just a click on your phone. If I start feeling uneasy about my bank, I can just say, "I want my money out now."

51:30

I think the potential for bank runs to happen quickly is definitely there. You can move your money between banks or to an e-money provider, so I don't think that's something unique to CBDCs. Plus, if a bank is unstable, it's not our job in the public sector to make people keep their money in a bad bank. We're central banks and regulators, and we're supposed to protect the stability of the financial system.

51:58

It's really important to ensure that banks meet the basic requirements for capital and liquidity. Having that outside option could actually be a good thing because it encourages banks to invest more in risk management and avoid problems. But honestly, I don't think there's a huge difference between having a central bank digital currency (CBDC) and having fast payment systems or electronic payments like we do now. In either case, if a bank isn't stable, it doesn't really matter.

52:26

Losing the trust of clients can make people want to leave, but that shouldn't stop us from pushing forward with innovation in the financial system. Thanks, Jon, for sharing those extra thoughts. I'm not sure if there are any more questions here—do you see any? No? Alright, then let's talk about something that's really been on the minds of central banks and everyday people: how we approach this issue.

53:05

When it comes to protecting privacy in CBDC use, we talked before about how data itself can be really valuable, especially for helping people access financial services. But when we think about payments, it varies by country. Not every place feels the same way about how much privacy people should have. Some folks want more anonymity in their transactions, while others are okay with sharing some of their data with potential lenders. So, what do you think we can do about this?

53:37

"We need to find a middle ground between protecting personal privacy and making sure everything stays above board. We can't let CBDCs be used for money laundering or funding terrorism, and we also have to watch out for predatory lenders and consumer protection issues. So, how do we balance all that? A lot of central banks are trying to figure this out, especially when it comes to these concerns."

54:18

One of the toughest challenges facing policymakers, especially in this regulatory circle, is figuring out how to handle fully anonymous, token-based systems. We all seem to agree that going completely decentralized isn't the best path, mainly because of the risks related to integrity and other concerns. As Jon and Natalie pointed out earlier, with CBDCs, you can separate identity information from the transaction itself.

55:00

So, there's a way to separate what the central bank can see, like transaction details and verification stuff, from the account info that's with financial service providers. We're talking about integrity risks and how to properly vet customers. Also, there's the tech side of things, like privacy-enhancing technology. For instance, the ECB is checking out blind signatures.

55:41

The B Innovation Hub is exploring some cool stuff, like zero-knowledge proofs, which is a different experiment that could open up new possibilities. And we keep stressing that there should be tiered KYC requirements when it comes to regulations. When I mention being fully anonymous, my colleagues often point out that it's not really feasible since everything digital leaves some kind of trace. But that's just how it's designed.

56:18

You can set up some transactions that are pseudonymous by keeping the ownership and identity details separate in the transaction info. I'll stop there. Thanks, thanks, Haocong. I think we're getting close to the end of our time. So, maybe I could ask each panelist to share one final thought in under a minute—what's the key takeaway you want the audience to remember? How about you, Jon?

56:58

Sure, thanks! I think this has been a really helpful discussion. One thing I want to share with everyone is that we really need solid evidence and real-life examples in this field. Right now, there's a lot of great research happening, and it's a fantastic opportunity for researchers to get involved, share stories, and collect data about what's going on in practice. So, yeah, we really need that!

57:25

"You can really learn a lot from those countries that have decided to try out a pilot or even launch a CBDC. I think there's still a ton more to learn from this, and I expect we'll gain a lot more insights in the next year or two as these projects move forward. Thanks, Jon. How about you, any main takeaway you want to share? Sure! If we really broaden our perspective to see the vision laid out in FNET, you know, if we can do everything on-chain..."

57:58

With digital money and tokenized assets, it's definitely secure and efficient, plus it cuts costs. But when you really look at it, especially in many of our developing client countries, there's a clear policy goal. We need to carefully consider what issues we want the CBDC to tackle and what the current situation looks like. Moving forward, there's likely going to be a mix of cash and digital options.

58:41

So, about the current format of CBDCs, I just want to say thank you, Deputy Governor Natalie Haynes, and everyone else. So, here's my advice: there's no one-size-fits-all approach when it comes to rolling out CBDCs. I really encourage you to consider your entire ecosystem, like the level of digital access, whether people are banked or unbanked, and what your goals are. You might have one goal or several, and you need to think about whether the CBDC design you're planning to use will actually help you meet those goals.

59:17

"You've got your goals, and I know it might sound a bit repetitive, but really think about it—you might be able to hit those goals in a different way. Also, right from the start, make sure

you identify and get all the key players involved so that everyone you need for the success and acceptance of CBDC is on the same page. And, of course, having a solid governance framework for implementation is crucial. Thanks so much! For me, I'd say one takeaway is that financial inclusion is super important, but honestly, it's a tough challenge."

59:54

It's a tough challenge, but we should definitely give it a shot. I think CBDCs could really help people who are usually left out of the financial system by making payments easier for them. Central banks are actually working on creating CBDCs with financial inclusion in mind, which is a pretty unique chance we shouldn't miss. That said, figuring out how to make it happen is going to be a major hurdle. Once we have a plan, it's going to take a lot of work to set up the right incentives.

01:00:35

"We need to find ways to get both consumers and merchants on board with this ecosystem, motivate intermediaries, and manage the financial impacts of CBDCs. It's a big task, but I see it as a great opportunity we should seize. Once we bring the unbanked population into the payment system, we can start developing other projects and products on top of that. It's going to be an exciting journey!"

01:01:14

"Let's wrap this up. I want to give a shoutout to the Toronto Center for putting this conversation together and to the Center for Financing Inclusion for hosting us. Thanks so much for being here! I hope you all enjoyed the chat. Thanks!"