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12 COMMODITY FUTURES TRADING COMMISSION

13 GLOBAL MARKETS ADVISORY COMMITTEE

14 July 17th, 2023

15 9:00. a.m. - 3:30 p.m.

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18 New York Stock Exchange

11 Wall Street

19 New York, NY 10005

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1 FEDERAL OFFICER RAIMONDI: Good morning,  
2 everyone. Welcome to today's meeting of the CFTC's  
3 Global Markets Advisory Committee, or GMAC for  
4 short.

5 My name is Phil Raimondi. I am -- as the  
6 alternate designated federal officer of the GMAC, I  
7 note that we have a quorum with -- with most members  
8 here present, as well as some virtual members, and I  
9 will be providing the full list to the -- to the  
10 court reporter. So that's -- for the record, we  
11 have the quorum.

12 And, unfortunately, Brigitte Weyls could not  
13 make it today, so we're going to do just do our best  
14 and make everything work out really well.

15 So it's my pleasure to call this meeting to  
16 order, and I would like to now turn the meeting over  
17 to the -- to the new chair of GMAC, Amy Hong, head  
18 of Market Structure and Strategic Partnerships,  
19 Global Banking and Markets at Goldman Sachs.

20 CHAIR HONG: Thank you. It's a pleasure to be  
21 here today with my co-chair Darcy Bradbury, and  
22 Commissioner Pham, the sponsor of the GMAC, as well  
23 as Commissioners Johnson and Mersinger, along with  
24 our distinguished keynote speaker Lynn Martin,

1 Before we begin, I would like to extend a warm  
2 welcome to Commissioner Pham. This is the second  
3 GMAC meeting under Commissioner Pham's leadership,  
4 and I am very much looking forward to working with  
5 you, the GMAC members, and our new subcommittee  
6 members.

7 This is the first meeting since the Commission  
8 voted to approve the three new GMAC subcommittees,  
9 global market structure, technical issues, and  
10 digital asset markets, along with the appointment of  
11 128 members across the three subcommittees  
12 constituting the largest ever single advisory  
13 committee initiative sponsored by the CFTC.

14 I know that we have a number of subcommittee  
15 members in attendance today, and I'd like to extend  
16 a warm welcome to each of you. I look forward to  
17 the recommendations you will present to the GMAC in  
18 the future. I'd also like to thank our GMAC members  
19 and presenters for their time, and welcome all  
20 members to share their perspectives during our open  
21 discussions following the panels.

22 Now I would like to turn it over to my co-chair  
23 Darcy Bradbury, managing director and head of public  
24 policy at De Shaw company.

1 pleasure to be here today. And thank you to our  
2 sponsor, Commissioner Pham, who calls us constantly.  
3 She's on the move everywhere, and I think you can  
4 see all of that energy reflected in the great room  
5 we have here today. And it's great pleasure to be  
6 with Commissioner Mersinger and Johnson, as well,  
7 both of whom are intellectual partners in a lot of  
8 these issues, and we really, really appreciate you  
9 being here.

10 I'm really happy to be sitting next to Amy  
11 because about a month ago, we didn't have a chair.  
12 And I looked around at the committee membership and  
13 I thought, who would do a really great job so I don't have  
14 to do as much work? And I came up with Amy, and  
15 she's doing already a terrific job. So I'm very  
16 pleased to be partnered with you. And also really  
17 happy to have the subcommittees named, and the  
18 subcommittee chairs in place because as you all  
19 know, the subcommittees is where a lot of the  
20 substantive work is going to happen for the  
21 committee.

22 Since our last GMAC meeting in February, we've  
23 sort of focused on a few key initiatives. We have  
24 panels here today that are going to start to explore

25 those, lay some of the foundations for the

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1 discussions that are then going to be taken by the  
2 subcommittees, and we look forward to that. And --  
3 so let me pass back to Amy.

4 CHAIR HONG: Great, thank you, Darcy.

5 To begin the meeting, I'm pleased to recognize  
6 Commissioner Pham for her opening remarks, followed  
7 by Commissioners Johnson, Mersinger, and Goldsmith  
8 Romero, after which we will hear from our keynote  
9 speaker Lynn Martin. Commissioner Pham, you have  
10 the floor.

11 COMMISSIONER PHAM: Thank you so much,  
12 everyone. It's just such a pleasure to be here this  
13 morning, and I'm going to keep my remarks brief and  
14 informal because this is the second time that we are  
15 all coming together.

16 But it is just really such an honor to sponsor  
17 and host the Global Markets Advisory Committee here  
18 at the New York Stock Exchange. I could not think  
19 of a more appropriate forum to discuss the evolution  
20 of our global financial markets as we sit within the  
21 largest Stock Exchange in the world.

22 This great institution has stood the test of  
23 time and has been used as a key barometer of every  
24 major financial event in modern times; it is served

25 at the center of capital formation and financial

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1 evolution for countless businesses that make the  
2 U.S. and global economies run.

3 Global Capital Markets truly are the lifeblood  
4 of the global financial system and that's why I  
5 thought this could be the best and most appropriate  
6 location for our second advisory committee meeting.

7 And, in particular, I think, as you go back to the  
8 history of the New York Stock Exchange, all the way  
9 back to that Buttonwood tree, how better a place to  
10 think about how the technology that underpins our  
11 Global Capital Markets has changed from paper stock  
12 certificates to electronification and to finally to  
13 tokenization, which we will talk about more this  
14 afternoon.

15 As I noted at my first GMAC meeting, Global  
16 collaboration and coordination are critical to  
17 promoting regulatory cohesion and financial  
18 stability and mitigating market fragmentation and  
19 systemic risk. To this end, I have scoured the  
20 globe to cultivate a truly impressive historically  
21 wide-reaching collection of members. And I thank  
22 all of you, who have made the trip here today, and  
23 many of our newly appointed subcommittee members as  
24 well.

25 In total, as Amy noted, there are 128 members

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1 across the GMAC and its subcommittees, and it was an  
2 incredible process to have you all appointed. And I  
3 have to thank my team, particularly Brigitte Weyls,  
4 Phil Raimondi, the ADFO; Gates Hurand, who previously  
5 was our designated federal officer, and Meghan Tente,  
6 my chief of staff. It was an incredible amount of  
7 paperwork both for my team and our Office of General  
8 Counsel, and for all of you. So thank you so much  
9 for completing that.

10 I'm thrilled that we've pulled together so many  
11 critical decision-makers who are willing to take the  
12 time to serve, and taking this time away from your  
13 day jobs.

14 First of all, I would like to recognize Amy  
15 Hong for serving as chair, and Darcy Bradbury for  
16 serving as co-chair of the GMAC. They've been both  
17 incredibly instrumental in making today happen. And  
18 thank you very much, Amy, for stepping up as a  
19 last-minute pinch hitter. I could not imagine a  
20 better person to lead us forward. I've worked with  
21 Amy in the past, and I'm really looking forward to  
22 her leadership of the GMAC going forward.

23 Amy is the head of Market Structure and  
24 Strategic Partnerships for Global Banking and

25 Markets at Goldman Sachs. She's a true thought

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1 leader in our global financial markets and serves on  
2 the boards of the International Swaps and  
3 Derivatives Association Long-Term Stock Exchange and  
4 Ice Clear Credit, as well as the risk committees of  
5 Ice Clear Credit, and Ice Clear Europe. Amy joined  
6 Goldman Sachs in 2006 as an analyst in the  
7 Investment Banking Division and was named Managing  
8 Director in 2017.

9 Darcy needs no introduction, but she's the  
10 Managing Director and Head of Public Policy for  
11 D.E. Shaw & Co. In addition to her many industry  
12 leadership roles, Darcy's impressive public service  
13 includes having served as the Assistant Secretary  
14 for Financial Markets in the U.S Department of  
15 Treasury, and on the Municipal Securities Rulemaking  
16 Board. Thank you again so much for your exceptional  
17 leadership to the GMAC.

18 I also would like to thank Tom Wipf for His  
19 time serving as GMAC chair prior to this meeting.  
20 His leadership and strategic guidance were critical  
21 to the launch of the GMAC, and he will be greatly  
22 missed, but we wish him all the best in his new  
23 endeavors.

24 For today's GMAC meeting, we have an incredible



25 program and a lot of ground to cover. We're going

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1 to cover critical issues affecting all stakeholders  
2 in our global financial markets. We will hear  
3 perspectives from policymakers, dealers, asset  
4 managers, liquidity providers, exchanges, trading  
5 facilities, clearing houses, technology service  
6 providers, and end users.

7 Our three panels will focus on the impacts of  
8 treasury market reforms, swap block thresholds  
9 changes, and the tokenization of real assets and  
10 institutional adoption. We will also hear updates  
11 from each of our GMAC subcommittees; global market  
12 structure, technical issues, and digital asset  
13 markets.

14 As our opening keynote, we will first hear from  
15 New York Stock Exchange President Lynn Martin.  
16 Ms. Martin has demonstrated admirable leadership  
17 over the historic institution we find ourselves in  
18 today. She is the 68th President of the New York  
19 Stock Exchange, and the second woman to lead the  
20 exchange in its 230 year history. She also serves  
21 as chair of the fixed income and data services  
22 business at ICE after serving as its President. In  
23 that role, she was responsible for fixed income  
24 execution venues, securities pricing and analytics,

25 reference data indices, desktop solutions,

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1 consolidated feeds, and connectivity services that  
2 cover all major asset classes. Prior to these  
3 roles, Ms. Martin served as President of ICE Data  
4 Services, COO of ICE Clear U.S., and held a number  
5 of additional leadership roles including CEO of New  
6 York Stock Exchange Liffe U.S., and CEO of New York  
7 Portfolio Clearing. It's truly an honor to hear  
8 from such an amazing leader in our financial  
9 markets.

10 For our first panel on treasury markets reform  
11 implications and lessons learned from derivatives  
12 markets, we will address the recent turmoil and  
13 impacts of the stress and volatility in the treasury  
14 markets. And, in particular, looking at the market  
15 structure changes in the derivatives markets and how  
16 that may share some lessons for the proposed --  
17 proposed changes to transparency and clearing.

18 Given the interest rate environment and recent  
19 stresses in financial markets, including events  
20 surrounding the regional bank failures and the debt  
21 ceiling, we will dive into recently proposed U.S  
22 Treasury market reforms. I'm looking forward to a  
23 robust discussion of the potential impacts to  
24 derivatives markets stemming from several proposed

1 markets and products.

2 Further, we recognize that these critical  
3 markets, especially interest rate futures and swaps,  
4 are now largely traded electronically and centrally  
5 cleared; that transformation may provide some  
6 insights into how change and closely related  
7 treasury markets could productively evolve. We will  
8 hear insights from Citadel, J.P. Morgan, Tradition  
9 and BlackRock among others.

10 For our second panel on swap block thresholds,  
11 I'm looking forward to a dialogue regarding the  
12 impact of swap block and capsizes, which were  
13 recently revised by the Commission. Blocked  
14 transactions are an integral part of U.S derivatives  
15 markets. The Dodd-Frank Act brought about sweeping  
16 changes, the transparency of U.S Treasury markets,  
17 which includes countless block transactions. During  
18 this panel, we will hear from thought leaders at  
19 BlackRock, ISDA, Bloomberg, Tradeweb, and Barclays  
20 among other stakeholders.

21 And finally for our third panel on tokenization  
22 of digital assets, we will address a major area of  
23 innovation and evolution that's impacting our global  
24 financial markets more and more each day. Not only

25 our financial markets, but beyond to the real

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1 economy as well. I'm looking forward to hearing  
2 from several experts regarding how this evolution is  
3 affecting our day-to-day life.

4 In particular, I'm very pleased to welcome Per  
5 von Zelowitz, the Director of the New York Fed  
6 Innovation Center for the first ever presentation of  
7 their recently released findings of their proof of  
8 concept to explore the feasibility of wholesale  
9 digital asset settlement called the Regulated  
10 Liability Network. We are lucky to hear directly  
11 from him, and I'm very excited for that.

12 I'm also looking forward to hearing from Adam  
13 Farkas, GMAC member and CEO of GFMA and AFME  
14 regarding their recently released white paper, which  
15 is about the impact of tokenization on Global  
16 Capital Markets.

17 We also will be hearing from experts from  
18 McKinsey, as well as presentations from HSBC  
19 recently regarding the digital bond issuance for the  
20 European Investment Bank in pound sterling.

21 Finally, I really want to recognize all of the  
22 work and the efforts here at the Stock Exchange for  
23 graciously hosting us; it was a lot of work, and I  
24 could not appreciate it more for pulling this group

25 together.

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1 I'd also like to thank the CFTC staff,  
2 particularly Gurdeep Seehra, who joins us from the New  
3 York office and, again, my team for which I am  
4 eternally grateful every day for making my job  
5 possible.

6 I also want to recognize my daughter Eleanor  
7 Fountain who has joined us today as an intern to our  
8 intern Will Dempsey. Look for them because they  
9 will be directing you where to go all day today.

10 And, I think, finally, I'll just close this on  
11 a personal story. I have lived and worked downtown  
12 in New York for probably about the last eight years.  
13 And during COVID, when everything was closed down, I  
14 would take a little break in between my conference  
15 calls and go get my morning coffee, and I would walk  
16 by the New York Stock Exchange most of the time when  
17 they were doing their IPOs. And every day that that  
18 happened, I couldn't tell you about the excitement  
19 and the energy and all of the look on the faces of  
20 the people who were reaching the pinnacle of their  
21 professional lives and probably for their personal  
22 lives as well. And every day that I saw an IPO, I  
23 saw their hopes and their dreams realized.

24 This GMAC has been a hope and a dream of mine;

25 it's been over a year in the making. Thanks so much

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1 to all of you here who are a part of that. You've  
2 helped me achieve probably the -- the beginning, but  
3 hopefully not the highest point of my professional  
4 career as a Commissioner. So thank you so much for  
5 being here today.

6 CHAIR HONG: Thank you, Commissioner Pham.

7 Commissioner Johnson, the floor is yours.

8 COMMISSIONER JOHNSON: Good morning. Thank you

9 so much, Commissioner Pham. Thank you so much to

10 GMAC Chair Ms. Amy Hong, and also to Brigitte Weyls

11 in her absence. Tremendous kudos, Phil, as you're

12 holding things down here in the room; it is not an

13 easy slot -- space to have to fill in. These

14 meetings are well planned and exceptionally, well

15 executed. As Commissioner Pham mentioned,

16 tremendous amounts of effort and energy going into

17 planning. So to pinch hit at the last minute really

18 illustrates how fantastic you are, so thank you so

19 much, Phil.

20 This feels like a homecoming in so many ways.

21 I remember flying in for a super Tuesday event --

22 some of you will know what that is -- many years ago

23 when I was a senior in college, because a friend of

24 mine and I had read a book in the library about

25 investment banking. Not long after that, I was a

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1 college graduate -- or recently graduated by weeks,  
2 I mean, and I moved to New York City to start  
3 analyst training wildly intimidated by a fantastic  
4 woman named Charmaine Rose Romani. Those of you who  
5 know her are also immediately clear about why I was  
6 intimidated.

7 Last year I had the privilege of coming back to  
8 the New York Stock Exchange and having a great visit  
9 with our keynote speaker Ms. Lynn Martin President  
10 of the New York Stock Exchange Group, and a  
11 wonderful opportunity to visit with Chair of the  
12 Board of Directors and former CFTC Commissioner  
13 Sharon Bowen. Spending time with these ladies  
14 really was inspiring and invigorating. It also gave  
15 me an opportunity to tour the exchange, which I had  
16 never done before.

17 And so to Commissioner Pham's point. Walking  
18 past that Buttonwood agreement, I was touched in  
19 part because I thought of people like Jay Woods III,  
20 elected executive floor governor, the highest  
21 distinction given to a floor member, and how  
22 thoughtful and kind he was in receiving me.  
23 Standing next to that preserved document the  
24 Buttonwood agreement, I had to appreciate that it

25 represents one of the most important moments in the

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1 history of our nation, and it's something the  
2 history about has really motivated me for many  
3 years.

4 I'm sure you're aware that it was signed  
5 May 17th, 1792. My kid can recite that in his  
6 sleep, I can promise you. There were 24 stock  
7 brokers who gathered outside a building at 68 Wall  
8 Street. The agreement is a foundational document  
9 that led to the creation of the New York Stock  
10 Exchange, but so much more. Today, as we will hear  
11 shortly, trading is faster, more complex, executed  
12 algorithmically on electronic systems. Long gone  
13 are the slips of paper tucked into the top hats of  
14 gentlemen gathered in coffee houses here in lower  
15 Manhattan. The accelerated global pace of trading.  
16 The diversity of financial products traded, and the  
17 significance of the impact of trade execution  
18 clearing and settlement. The possibility that an  
19 error, or a flaw, or a challenge, or a fat-finger  
20 mistake in one jurisdiction could impact trading  
21 around the world really has left us with some clear  
22 understanding. First, that our financial system is  
23 global. And, second, that our markets are deeply  
24 interconnected.



25 As the sponsor of MRAC, I'm excited to be here

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1 to join you today mostly because I get to sit and  
2 listen and absorb all of your expertise and all of  
3 your learning. I love how Darcy suggested that this  
4 is intellectual collaboration; it is a coalition of  
5 the willing, and I'm excited about the  
6 complementarity that has naturally arisen as we look  
7 at the most complex issues facing our markets.

8 The MRAC has had a decade of time to begin to  
9 build and develop well-received recommendations  
10 adopted by the Commission. I'm excited that  
11 Commissioner Pham and GMAC are choosing to walk  
12 alongside, and that we can together, I hope, really  
13 develop suggestions that are salient and important  
14 and that really impact -- and impact our markets  
15 positively.

16 I'm also thoughtful about a number of other  
17 issues that I'll share with you very quickly, as  
18 things I've been deeply concerned about in the  
19 context of global financial markets specifically  
20 systemic risk issues that imminent and global in  
21 nature.

22 Over the last year, I've spent a significant  
23 amount of time with a number of you at a number of  
24 conferences all over the world. I've spent time

25 with other regulators including Sarah Breedon from

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1 Bank of England, and others, FSB. Deeply thoughtful  
2 about the prominence of non-bank financial  
3 institutions. In the wake of SVB and Credit  
4 Suisse's crises. I'm deeply thoughtful about the  
5 extent to which there is a need to focus once again  
6 on the resilience of our system. Even though we've  
7 demonstrated in these difficult times with extreme  
8 volatility and persistent challenges, including  
9 those brought on by geopolitical events, namely,  
10 Russia's invasion of Ukraine. There is -- there is  
11 a need now, more than ever, to refocus and redouble  
12 our efforts.

13 Today, as you all describe treasury market  
14 reforms, I'm eager to hear about your thoughtfulness  
15 regarding how treasury markets, a complex structure  
16 involving a number of market participants and  
17 regulators, can be improved in ways that -- that  
18 re -- establish and re -- and assure systemic risks  
19 are mitigated in global financial markets.

20 I'm deeply thoughtful about the extent to which  
21 proposals by other regulators in cooperation or  
22 collaboration across U.S federal officer regulators  
23 will be critical to solving these questions. These  
24 are issues the MRAC is also deeply engaged with

25 respect to -- with respect to swap block thresholds

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1 and tokenization.

2 I have a number of thoughts, but I'm eager to  
3 hear from the experts gathered in this room. My  
4 door is open at my office in Washington D.C., and my  
5 heart and mind are open to the ideas and enthusiasm  
6 you all have as part of the businesses that are  
7 growing the global economy.

8 I'm hopeful that everyone can recognize the  
9 tremendous amount of effort, energy that was put  
10 into organizing today's meeting. I also, as a  
11 member of the Commission, want to recognize the gift  
12 of your time, talent, and expertise given to us this  
13 morning and this afternoon, throughout today.

14 Thank you so much Commissioner Pham for having  
15 me. I wish you all a wonderful meeting and exciting  
16 work streams.

17 CHAIR HONG: Commissioner Johnson, thank you.

18 Commissioner Mersinger, thank you.

19 COMMISSIONER MERSINGER: Thank you to  
20 Commissioner Pham for organizing today's global  
21 markets advisory committee.

22 Certainly, thank you to the New York Stock  
23 Exchange for hosting us in this beautiful conference  
24 room.

25 My remarks. I start with walking past the

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1 fearless girl, but I have to admit, she has moved.

2 So I didn't really walk past her this morning, so

3 I'm just going to pretend as though I did. I'll

4 think about the last time I visited and I walked

5 past the fearless girl statue.

6 But the reason I mentioned this is -- the day I

7 was sworn in, Commissioner Stump gave me a gift. I

8 had the privilege of former Commissioner Stump

9 actually issuing my oath of office. And as she

10 swore -- after swearing me in, she handed me a small

11 cylinder that contained a photo of the fearless girl

12 statue and a postcard that says, Remember your why.

13 And as I was preparing for this meeting that refrain

14 kind of kept going in my head, Remember your why.

15 And it's just been echoing in my head with a lot of

16 responses and examples that follow in that train of

17 thought.

18 So for me, my why today is all about good

19 governance and being an informed public servant.

20 It's about recognizing the duties and

21 responsibilities the position that I hold, but with

22 the understanding that executing those duties and

23 responsibilities requires me to engage with

24 stakeholders and experts who can share with me a

25 level of knowledge and expertise I could never

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1 obtain on my own.

2 My why is answered at every advisory committee

3 I attend because these meetings repeatedly

4 demonstrate the importance of government engagement

5 with market participants and the public to

6 effectuate good public policy.

7 Today's agenda includes so many topics that are

8 ripe for this level of engagement between the agency

9 and those stakeholders who will be or already have

10 been impacted by policies proposed or adopted by the

11 Commodity futures Training Commission. But I'm not

12 going to go down the full list and mention all these

13 important topics, but there is one I want to focus

14 on for a few minutes and that is the block size

15 threshold related to real-time swap data reporting

16 requirements.

17 I'm not focusing on this because it's any more

18 important than the other topics before us today, but

19 I'm going to keep -- but in keeping with

20 Commissioner Stump's advice, Remember your why, I

21 think it's critical to return to the upcoming

22 implementation of the CFTC's recent rulemaking on

23 this topic because there was work left undone.

24 Amendments to real-time reporting requirements

25 related to block size thresholds were adopted under

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1 former Chairman Heath Tarbert on September 17th,  
2 2020; however, those amendments continued to  
3 calculate swap block size using percentages that  
4 were initially adopted in May of 2013.

5 I think everyone here today can -- can admit  
6 and realize that ten years in this -- in the markets  
7 we regulate a lot can change. And achieving the  
8 reporting of quality swap data has proved to be  
9 quite challenging, which is why Commissioner Stump  
10 felt so strongly about the need for continued public  
11 engagement on the swap block threshold sizes. In  
12 fact, during that September meeting, Commissioner  
13 Stump said, I believe that the driving force behind  
14 the substantial rewrite of the swap data reporting  
15 rule said that the staff was not confident in the  
16 quality of the data and an overhaul was needed to  
17 provide the Commission with complete and accurate  
18 information such that we can have a data-driven  
19 policy making. Unfortunately, the outcome with  
20 regard to blocks is predetermined under this rule.  
21 I believe the more prudent course of action would be  
22 to finalize the remainder of the rules before us  
23 today. Put aside any Commission action on block  
24 changes until the Commission and the public can

25 consider the changes being put forward, and the

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1 Commission has the benefit of new more reliable  
2 data; however, that is not the question before the  
3 Commission, and as such, there's no formal mechanism  
4 for the public to opine, even though we are delaying  
5 implementation of the block changes by 30 months.  
6 And in response to Commissioner's Stump statement,  
7 then Chairman Tarbert agreed to hold a public  
8 discussion on the swap block data thresholds. He  
9 stated, I always think we should be focused on  
10 getting better; that's good government, and I'm more  
11 than happy to support such a public discussion on  
12 the topic of calculating block thresholds both as  
13 they apply to real-time reporting, as well as any  
14 impact on execution methods. As response -- as a  
15 responsible regulator, we must adjust the data  
16 information. If we see that information and market  
17 dynamics evolving, then I think we act accordingly.

18 But, regrettably, the Commission never had the  
19 opportunity to return to that conversation, and we  
20 are now set to move forward with the implementation  
21 of swap block size thresholds on December 4th of  
22 this year based on potentially outdated percentages.  
23 This may result in bad policy outcome for the swap  
24 markets and end users such as those who manage

1 millions of Americans that rely on them. Without  
2 further conversation and consideration of the  
3 underlying fundamental calculations behind the block  
4 size threshold, the CFTC's why of promoting the  
5 integrity, resilience, and vibrancy of the U.S  
6 Derivatives Market through sound regulation is at  
7 risk.

8 Commissioner Pham and GMAC, are ensuring that a  
9 long overdue discussion of the impact of the CFTC's  
10 swap block thresholds on market liquidity and  
11 execution quality occurs today, and I look forward  
12 to any conclusions and recommendations resulting  
13 from this kind of conversation.

14 Again, thank you to Commissioner  
15 Pham for holding today's meeting. Thank you to the  
16 staff who I know put a lot of time and effort into  
17 creating the agendas and preparing for the meetings.  
18 Thanks to all the GMAC members and the subcommittees  
19 for your service to the -- to the CFTC and to the  
20 public. And, again, a sincere thank you to the New  
21 York Stock Exchange for hosting us. It is truly an  
22 honor to be here today. Thank you.

23 CHAIR HONG: Commissioner Mersinger, thank you  
24 for your remarks.



1 Commissioner Goldsmith Romero.

2 COMMISSIONER GOLDSMITH ROMERO: Good morning.

3 I'm pleased to welcome back the members of the

4 Global Markets Advisory Committee.

5 I want to recognize Commissioner Pham for her

6 sponsorship of the committee, and thank the staff

7 for all the work that goes into organizing today's

8 meeting.

9 How wonderful that you could be at the New York

10 Stock Exchange. I'm sorry I could not be with you.

11 I was excited to go, but I sponsor the Technology

12 Advisory Committee that meets in Washington

13 tomorrow, and so I needed to be here for my own

14 committee members.

15 As GMAC starts examining U.S Treasury market

16 reforms, it's important to recognize that the U.S

17 Treasury futures markets have performed very well,

18 are transparent and subject to central clearing.

19 And this is particularly true of the ten-year

20 treasury futures contract, which has been very

21 liquid.

22 I'm glad that the presentation today recognizes

23 these positive features of the Treasury futures

24 markets and that we're looking to see if that can

25 provide some insights into treasury cash market

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1 potential reforms.

2 The reforms that have been proposed, or are  
3 being considered right now by the other federal  
4 regulators relating to the cash market, often  
5 more specifically the repo market. And I can  
6 understand why regulators are considering reforms to  
7 the U.S Treasury market as it is the deepest and  
8 most liquid market in the world and plays a central  
9 role in the global financial system.

10 The cash U.S Treasury's market has grown  
11 rapidly and has suffered certain market stresses  
12 raising concerns about adequate liquidity, including  
13 concerns raised last fall by Treasury Secretary  
14 Yellen.

15 At the last GMAC meeting, Treasury Assistant  
16 Secretary Josh Frost said that the treasury market  
17 continues to operate well despite geopolitical and  
18 macroeconomic uncertainty. This was welcome news  
19 given the volatility and stress experienced in  
20 recent years, and the potential, of course, for the  
21 cash market to impact the futures market.

22 So Assistant Secretary Frost was outlining  
23 steps that the Department is considering to increase  
24 the resilience of the U.S Treasury cash market to

25 adverse shocks. The foundational issue for reform

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1 under consideration is whether to expand central  
2 clearing to more treasury cash transactions  
3 primarily in repo markets. Currently, as you know,  
4 the cash market is bifurcated between cleared and  
5 uncleared transactions and that can result in risk  
6 and contagion. Additional Central clearing may give  
7 more transparency and more certainty during times of  
8 market stress and has the potential to reduce  
9 systemic risk. Additional Central clearing would  
10 also provide an opportunity to give the CFTC more  
11 transparency into positions that are held over both  
12 the cash and the futures treasury market.

13 The critical issue, as many of you know, is  
14 what and who would fall into the expanded clearing.  
15 And this is a complex issue that is subject to  
16 current debate, so I look forward to the discussion  
17 today. For example, there are transactions that may  
18 look like repo transactions, but there are other  
19 transactions with other purposes, and broker  
20 customer protection rules remain very important.

21 In the end, U.S Treasury market reform presents  
22 opportunities, but there are a number of important  
23 issues and considerations, and I really look forward  
24 to hearing the GMAC members views and insights. I

25 also look forward to the presentations on the block

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1 transactions, as well as the tokenization of assets.

2 I thank Commissioner Pham for working with me  
3 to prevent any duplication of efforts with the work  
4 of the Technology Advisory Committee.

5 I want to finish by saying that I understand  
6 that GMAC is now the largest advisory committee  
7 ever, and I'm so grateful that so many of you wish  
8 to serve. And I really thank all the members for  
9 their service, and I also welcome the new chair Amy.

10 Thank you.

11 CHAIR HONG: Commissioner Goldsmith Romero,  
12 thank you for your remarks.

13 Now for our opening keynote, I'd like to  
14 welcome the 68th President of the New York Stock  
15 Exchange group, Lynn Martin.

16 Ms. Martin, we're delighted to have you here  
17 with us today. You have the floor.

18 MS. MARTIN: Well, thank you all. It's an  
19 honor to be with you all today. Thank you  
20 Commissioner Pham, Commissioner Goldsmith Romero  
21 virtually, Commissioner Mersinger, and Commissioner  
22 Johnson for holding GMAC at the New York Stock  
23 Exchange. It's something that we're incredibly  
24 excited, and I personally am incredibly excited to

25 host you all.

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1 Obviously, one of the reasons we are so excited  
2 about the ability to host this is because of our  
3 parent company ICE, which is the home of the Brent  
4 markets, the home of the European interest rate  
5 markets MSCI futures, FTSE futures, and Coffee,  
6 Cocoa, and sugar amongst other futures markets.

7 So I'm personally honored here today to welcome  
8 you for a variety of reasons. But if you would give  
9 me just a few minutes to explain why first you heard  
10 about our iconic history at the New York Stock  
11 Exchange.

12 We turned 231 years old this past May. And as  
13 you heard from some of the opening remarks, we were  
14 founded on the corner of Wall and Broad, which is  
15 where you entered the exchange today by 24 brokers  
16 under a Buttonwood tree. Their reason for finding  
17 the New York Stock Exchange was to develop a rule  
18 set that added transparency to markets. Something  
19 that I think has applicability, then, to have a  
20 transparent and open rule set to allow for price  
21 discovery, but also has applicability in today's  
22 markets.

23 Those brokers got together because they were  
24 negotiating how debt that was created from our young

25 nation's Revolutionary War was going to be traded;

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1 that was our nation's capital at the time. We had  
2 just inaugurated our first President on that street  
3 corner, and there was a variety of debt issued by  
4 the Bank of New York that was repaying the debt that  
5 was -- was used to finance the Revolutionary War at  
6 the time.

7 But, clearly, through technology, the face of  
8 the New York Stock Exchange has changed. So this  
9 building, to give you a little more historical  
10 context, was constructed in 1903. The room you are  
11 sitting in was, for many years, the main dining  
12 room; it was a room where the members of the  
13 Exchange sought to exchange information on an  
14 informal basis. So the way I think about the modern  
15 11 Wall Street in this technology age is an  
16 incredibly important and historic place to convene  
17 to exchange information. So the work that you all  
18 are doing today is exactly that; it's where thought  
19 leaders, where entrepreneurs, where innovators come  
20 to raise capital and to exchange ideas that are  
21 going to continue to transform the way the world  
22 operates.

23 Now, the second reason why I am so excited to  
24 welcome you here today is I got my start in the

25 exchange industry in the futures industry. I

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1 actually joined a futures exchange 22 years ago last  
2 month. That exchange was called life, at the time.  
3 It was backed by a couple of private equity firms,  
4 which then ultimately got acquired by Euronext,  
5 ultimately acquired by the New York Stock Exchange,  
6 and then just ten years ago was acquired by  
7 Intercontinental Exchange.

8 I spent 15 years working in the DCM and DCO  
9 context with Commissioners and staff. And as  
10 someone who was at the forefront of building their  
11 own exchange and building their own clearinghouse, I  
12 was continuing to applaud the work that the  
13 Commissioners and the staff do every day to ensure  
14 that what comes into our markets is resilient,  
15 reliable, and secure. I give you that context  
16 because there are a few points that I want to make  
17 before you all start the work of today.

18 Number one really is around the system  
19 safeguards that are in our traditional financial  
20 structures. Time and time again the enhancements  
21 that we've made to the DCM and the DCO frameworks  
22 continue to serve an incredibly important systemic  
23 function in the markets. If we didn't have these  
24 traditional frameworks and the enhancements that

25 have been made to those frameworks throughout

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1 multiple periods of stress and multiple financial  
2 crises, we would not have gotten through the last 18  
3 months of volatility so seamlessly and so  
4 transparently and protected so many consumer funds.

5 Now, in this technology age, I think it's  
6 incredibly important to keep that context in the  
7 back of your minds because we believe that  
8 technology is an enabler to make those structures  
9 better as opposed to a replacement for those  
10 structures.

11 Second thing that I wanted to say is: The  
12 importance of collaboration across frameworks. As  
13 someone who served on the SEC's FIMSAC for three  
14 years, the work that you all are talking about today  
15 with treasury clearing and the interdependence of  
16 the treasury futures markets and treasury cash  
17 markets is something that's near and dear to my  
18 heart. We have the most liquid, most transparent  
19 markets in the world. Our markets remain the envy  
20 of the world; it is why when people seek to raise  
21 capital they come to the U.S irrespective of where  
22 their companies are based. I think it's important  
23 that we in the U.S don't lose sight of our position  
24 as the envy of the global markets.



25 And the last point that I wanted to make is

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1 just the overall importance of reliability and  
2 resiliency on our systems. My colleague Stuart  
3 Williams who serves on GMAC and is COO of ICE is  
4 something that thinks about this every day. And as  
5 someone who is a technologist by trade and at heart,  
6 I think about the amount of capacity our systems are  
7 stressed under, particularly during the volatile  
8 times. One stat I'd like to talk about is during  
9 the really volatile periods of last year, we had  
10 half a trillion incoming order messages hitting our  
11 systems. We were processing those with a median  
12 response time of 30 microseconds. But equally as  
13 important as the response times, is the resiliency  
14 of our systems. During periods of stress, during  
15 times of volatility people want transparency they  
16 want to be able to find the bid, or the offer, or  
17 the fair market value. So something that we take  
18 very, very seriously is our resiliency, our  
19 footprint from a cyber security standpoint, and our  
20 response times and reliability to our customers. So  
21 despite whatever innovation, that is something that  
22 is always going to be near and dear and core to our  
23 business.

24 I want to thank you all for the work that you

25 do on this committee, Commissioner Pham. As someone

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1 who did serve on an advisory committee for a  
2 different administration, I know the importance of  
3 this work. I know the importance of the  
4 conversation that you all have, and the  
5 recommendations that come out of these types of  
6 convening.

7 So I wish you all the best for a successful  
8 GMAC meeting today. Thank you for hosting it at the  
9 New York Stock Exchange, and I'll turn it back to  
10 you -- to you. Actually, I'll turn it back to Chair  
11 Hong. Congratulations on your chair seat.

12 CHAIR HONG: Thank you very much, Ms. Martin  
13 for your thoughtful remarks.

14 Now, as we begin, I'd like to remind everyone  
15 that after each panel today there will be an open  
16 discussion for members of the committee. For GMAC  
17 members, when called upon, please identify yourself  
18 and the organization that you represent on the  
19 committee.

20 Now we'll kick off the meeting and begin with  
21 an update from our co-chair of the GMAC global  
22 markets structure subcommittee, Michael Winnike,  
23 Director and Head of U.S Market Structure in the  
24 Global Trading group at BlackRock. Michael.

1 thank you to Commissioner Pham and to your staff for  
2 all the hard work that you've done standing up the  
3 market structure subcommittee. I greatly appreciate  
4 all the paperwork and your leadership in these  
5 efforts. And also thank you very much to  
6 Commissioners Johnson, Goldsmith Romero, and  
7 Mersinger for your presence here today. We  
8 definitely benefit from your participation.

9 So it's an honor to take on responsibility for  
10 leading the market structure subcommittee with my  
11 co-chair Brad Tully from JPMorgan who unfortunately  
12 can't be here today, but who I know shares equally  
13 in my enthusiasm for taking on this important work.

14 I'll give a brief update on the status of the  
15 subcommittee, then cover the key themes from the  
16 February GMAC meeting, which are informing our  
17 agenda, before finally covering the major areas of  
18 work that the subcommittee intends to address.

19 Before then, handing it off to two great panels that  
20 I think will dive deeper into market structure  
21 topics such as treasury market reform and swap block  
22 sizes.

23 So I'm delighted to report that 34 industry  
24 leaders were appointed to the subcommittee roughly

25 two and a half weeks ago. They represent a broad

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1 array of market participants such as banks, broker  
2 dealers, asset managers, exchanges, CCPs, technology  
3 providers, trading -- trading -- trading venues,  
4 commercial end users and trade associations. Many  
5 of them are in the room today, and I know Brad and I  
6 would like to thank all of you for your agreement to  
7 serve on the subcommittee. I know that the  
8 recommendations that the subcommittee produces will  
9 benefit from your diverse perspectives and your deep  
10 expertise.

11 So the subcommittee has already held its first  
12 meeting. We met on Thursday of last week, and we  
13 covered at a high level the work plan that was  
14 identified for the subcommittee by Commissioner Pham  
15 with public input. The plan, at this point remains  
16 high level, but I'm already very pleased by the  
17 engagement that we've had for members over a very  
18 short period of time.

19 We are looking forward to returning to the GMAC  
20 meeting in October at which point we plan to present  
21 at least one specific recommendation for your  
22 consideration, as well as providing a more detailed  
23 overview of our timelines for other work plan -- for  
24 other areas of work.

1 work plan, I wanted to return to the February GMAC  
2 meeting, because that meeting did a great job of  
3 highlighting some of the key themes and also some of  
4 the challenges that are facing markets today and it  
5 sort of set the table, right, for what our work plan  
6 is going to be.

7 So if you look at the slides that we have; that  
8 first chart in the upper left-hand corner shows  
9 commodity market volatility. And this was a theme  
10 that many presenters raised. CME, and FIA, and  
11 others really had excellent detail on volatility in  
12 the commodity market, specifically. But it was also  
13 noted, and we believe, that we are in a period of  
14 heightened volatility overall and not just in  
15 commodities. There are acute market stresses,  
16 events such as the global pandemic, war in Ukraine,  
17 as well as longer term influences such as more  
18 persistent high inflation, raising interest rates,  
19 and reversals of long-term trends and globalization;  
20 that all contribute to a more volatile market that  
21 we all have to navigate. We should consider how  
22 rules and market structure are calibrated to this  
23 higher vol environment.

24 The second theme was constrained dealer balance

25 sheets and constrained capacity. So if you look at

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1 the second chart -- and this is specific to treasury  
2 markets -- it shows the outstanding U.S debt  
3 relative to available dealer balance sheet, which is  
4 sort of a proxy for intermediation capacity in the  
5 system.

6 Now this chart is specific to treasury markets,  
7 but charts are very similar. When you look at  
8 credit markets, or if you look at capacity and  
9 derivatives markets and other related markets. And  
10 presenters such as SGX, JPMorgan and BlackRock, all  
11 spoke about the challenges both to liquidity and  
12 capacity in clearing markets that may be related to  
13 capital constraints.

14 The forces of volatility and constraint balance  
15 sheets also impact ultimately end investors in liquidity  
16 in terms of cost and capacity. So if we look at the  
17 bottom left-hand chart -- well, yes, treasury  
18 markets are holding up well. Buyers are meeting  
19 sellers. The cost to interact in markets has  
20 markedly increased. And so if we take a look again  
21 at the chart, it's showing basically what is the  
22 cost to sweep liquidity at the touch, 5000 contracts  
23 and T futures. And as you can see, when markets  
24 became much more volatile, that cost skyrocketed and

25 has remained high. And so while buyers can meet

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1 sellers, the fact that it's expensive, does impact  
2 returns for investors and may make it more difficult  
3 for market participants to manage the risk.

4 And then the final point was across all of the  
5 presentations. Notwithstanding the challenges of  
6 volatility, constrained balance sheets, you know,  
7 the cost of interacting in markets it's clear that  
8 the derivative markets that the CFTC oversees are  
9 critically important to end users and investors  
10 alike. And even in times when markets are volatile  
11 and trading costs are high, as we can see from the  
12 bottom right-hand chart, there's still very broad  
13 participation and high volumes. And so I think that  
14 shows the importance of these markets and why we  
15 need to invest more in making them more efficient  
16 and safer for end investors.

17 So the work of the market structure  
18 subcommittee is really to examine, right, how the  
19 technology -- you know, the mix of rules and  
20 regulations, the commercial practices. These things  
21 that make up the market structure or what some call  
22 the plumbing of the markets can be adapted and  
23 evolved to address some of these themes and  
24 challenges.

25 The specific areas of work that have been

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1 identified include providing recommendations for  
2 global standards for best practices for market  
3 volatility, risk controls and circuit breakers. And  
4 this builds off of a great presentation that the FIA  
5 made in the prior GMAC meeting. And here we're  
6 really thinking about in the face of market  
7 volatility, what are the correct guard rails that  
8 exchanges can implement to protect market  
9 participants against a flash crash or rally, price  
10 dislocations while still balancing the need for  
11 continuous price discovery.

12 Also it gets back to this theme of  
13 interconnectedness. Markets are interconnected  
14 different investment products like ETFs. futures  
15 options are interconnected. We're interconnected  
16 across jurisdictions. So how do we set standards in  
17 a way that drive consistency across these markets  
18 without being overly prescriptive.

19 The second area that we intend to investigate  
20 is the treasury market reform and its impact under  
21 related derivative markets. And I think that  
22 interconnection presents both opportunities, for  
23 example, there might be great ways that we can  
24 unlock capital through cross margining between repo



25 markets and derivative markets. But there are also

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1 potential challenges that we should consider and  
2 spillover effects from one market to the other. And  
3 I look very forward to hearing more about this in  
4 the upcoming panel.

5 We will also look to provide recommendations to  
6 improve liquidity across asset classes including  
7 commodities, rates, credit markets with respect to  
8 capital clearing and collateral requirements.

9 And so obviously this is a very broad area but  
10 it is at the heart of the work that we hope to  
11 undertake to make markets more effective especially  
12 in light of the constrained environment we're in,  
13 and the upcoming Basel III Endgame reforms, which  
14 will continue to make capital scares. So it's  
15 important that we all think about what tweaks to  
16 regulations as well as commercial practices we can  
17 make to unlock greater efficiency in markets.

18 We will examine the role of derivatives and  
19 proper asset liability management and functioning of  
20 funding markets. And as we all saw with Silicon  
21 Valley Bank, derivatives markets when they're used  
22 appropriately could be extremely important to  
23 hedging practices, and are there any barriers to  
24 participation in these markets that we can consider

25 cost structural, or otherwise.

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1 Finally, we'll also look to provide  
2 recommendations for international alignment of  
3 trading and clearing obligations to address market  
4 fragmentation including swap execution facility and  
5 MTF requirements.

6 And, again, this is a broad area, but I'm very  
7 eager to participate in and hear more about this  
8 topic in the panel that Amy Hong is hosting later  
9 today.

10 So to conclude, I'm very much looking forward  
11 to learning from the upcoming panels, and also to  
12 delivering back to this group some practical  
13 recommendations in our efforts to create safer more  
14 efficient and more resilient markets.

15 Thank you.

16 CHAIR HONG: Thank you, Michael, we look  
17 forward to the recommendations coming from -- from  
18 the market structure subcommittee.

19 With that, I will turn it over to Darcy who  
20 will host our first panel on U.S Treasury market  
21 reform.

22 CO-CHAIR BRADBURY: Thank you.

23 So our goal is to think about the connections  
24 between the derivatives markets and the treasury

25 market and how proposed reforms could both impact

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1 the derivative markets, but also how maybe we could  
2 learn. We all know the derivatives markets have  
3 gone through a lot of change, a lot of regulatory  
4 change in the last ten years, and there may be some  
5 lessons there in how to most effectively introduce  
6 clearing and greater transparency into markets that  
7 would be useful for people thinking about the  
8 treasury markets.

9 I put together, I think, a really good panel.  
10 Different perspectives. Sell side, buy side,  
11 intermediaries. And so let me briefly introduce  
12 them, and then they're each going to make remarks.

13 So starting with Brian Fitzsimmons, who's Head  
14 of North America Rate Securities Trading at  
15 JPMorgan.

16 Max Segal, who's Vice President Global Trading  
17 at BlackRock.

18 Isaac Chang, who is Head of Central Execution  
19 Citadel Fixed Income at Citadel, who is a GMAC  
20 member.

21 And then Stuart Giles, Chief Strategy Officer  
22 at Tradition Americas who's a subcommittee member.

23 So they're each going to present, and then just  
24 pass it to the next, and at the end, we will open it

25 up for committee discussion. And if you want to be

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1 called on, just tip your name plate up. And I will  
2 try to get to everyone in the limited time we have.

3 So, Brian.

4 MR. FITZSIMMONS: Yes, thank you for having me  
5 today.

6 In the ten minutes that I have here, I want to  
7 touch upon two topics, transparency and clearing.  
8 So in terms of thinking about the lens for this, we  
9 obviously have the benefit of the swaps. And  
10 futures market having over a decade of public  
11 post-trade dissemination and -- you know, we  
12 recognize we're at the very early stages for the  
13 treasury market on the heels of last year's work by  
14 the interagency working group that came out of the  
15 RFI for treasury market resiliency and liquidity.

16 And I think that understanding the origin that  
17 has been referred to here already on the panel is  
18 very important in which it's really in the wake of  
19 March 2020 in which not just a dramatic drop in  
20 treasury market liquidity, but also a significant  
21 impairment to actual treasury market functioning and  
22 how that is -- that is a problem for all risk  
23 markets as the largest fixed income market in the  
24 world and risk -- risk-free bond market that helps

25 other fixed income markets function.

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1 So I think it's just important to highlight  
2 again that the real starting point for all of these  
3 efforts is to look for new ways to add resiliency  
4 and to protect liquidity.

5 And so a phrase that's been used that I think  
6 is important is the "do no harm" approach in terms of  
7 resiliency and liquidity as we approach this. So  
8 Under Secretary Nellie Lang discussed moving in a  
9 targeted incremental basis for treasuries, which I  
10 think is a very important -- and good starting point  
11 for the process. So I did bring a few visuals here.

12 Chart one in the upper left hand-corner.  
13 Really trying to draw out liquidity profiles and  
14 what is most similar to futures and swaps and what's  
15 different about the treasury market and is important  
16 to consider.

17 So on the first set of bar charts there -- so  
18 the -- is the size outstanding. So you have on the  
19 runs, off the runs, tips and bills. So in terms of  
20 on the runs for treasuries, the total share of  
21 outstanding is about 1 percent. The total trading  
22 volumes account for almost 60 percent including off  
23 runs, tips and bills. If you exclude bills, it gets  
24 closer to 80 percent. So you can see that for a

25 small fraction of the market there's just tremendous

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1 liquidity and that is really where a lot of the  
2 volume comes from. So I think that one of the  
3 important takeaways and things to think about that  
4 came out of the RFI and that -- under Secretary  
5 Liang talked about, is that on the runs really most  
6 closely mirror futures. And there will be more  
7 benefits that I'm sure we can get into in talking  
8 about how we could more closely potentially link  
9 those. And that the -- the correlation between on  
10 the runs and futures, even during periods of high  
11 stress remains quite strong. So it's just important  
12 to draw out the comparison and what's relevant for  
13 treasuries, which is on the runs to futures we think  
14 is the most relevant. And that also in terms of the  
15 "do no harm" principle and protecting resiliency that  
16 as we approach the transparency framework, we really  
17 think about proper off the run treatment and how it's  
18 going to evolve in a calibrated manner as it worked  
19 down the liquidity spectrum.

20 And so just going right below it, actually,  
21 to -- chart three is one of the things sort of  
22 closely related to this. This just highlights uh  
23 the ownership profile of U.S treasuries with  
24 one-third of the market roughly owned by Foreign

25 entities, primarily reserve managers. And so U.S

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1 treasuries for reserve managers as a core holding to  
2 manage against their currencies, obviously, a  
3 critical part of the U.S Treasury landscape and  
4 universe. And just, one, to sort of represent as  
5 the largest -- that through this transparency regime  
6 and especially as you get into the deeper less  
7 liquid off the runs that have much lower turnover that  
8 the end goal should really be to protect these very  
9 large end users in terms of their -- their  
10 liquidity.

11 So moving over to chart number two and the  
12 topic of experience in futures and things to learn  
13 about that is already in place in both futures and  
14 swaps is block trading and reporting regime. And  
15 some of this comes with the lesson learned topic.  
16 So this shows that in the five -- the five-minute  
17 reporting period -- if you can see at the zero line  
18 and the little dotted line there, that is when the  
19 trade is made public. And so this is for treasury  
20 futures blocks. And what you can see -- a negative  
21 value indicates that the price movement is against  
22 the liquidity provider and generally tends to  
23 persist for some time. So this is one thing to  
24 consider. It's also -- the next panel that will go

25 into much greater detail. But the considerations

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1 for swap market -- excuse me, swap market block  
2 liquidity and the potential for increases in caps  
3 that is coming near the end of this year. So in  
4 terms of the framework that we take away from  
5 futures and swaps, I think it's very important to  
6 analyze what are appropriate volume caps and that is  
7 for even different segments within the market. So  
8 on the runs as well as off the runs. Consider the  
9 various needs for dissemination delays and what's  
10 appropriate, and then potential for aggregation and  
11 periodic disclosures potentially and much less  
12 liquid off the runs. And that, in general, the approach  
13 for cap sizes and reporting time should be  
14 appropriately risk adjusted and flexible. And I  
15 think that flexibility is important saying something  
16 that was touched upon by the panel already in terms  
17 of the swaps market that flexibility is certainly  
18 key.

19 So moving on to central clearing. As -- in  
20 terms of reference points, it's been over a decade  
21 of mandatory clearing for -- for swaps. And the  
22 good news is that it's generally operated quite well  
23 even through periods of stress. And another  
24 reference point that's specific to treasuries is to



25 try to tie it all in, I think is the SIFMA letter at

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1 the end of last year to the SEC trying to examine  
2 the cost benefits of clearing and treasuries. And  
3 it's two components of clearing treasury. So  
4 there's the cash transaction side as well as  
5 treasury repo, which is actually already a  
6 well-developed and robust market.

7 So in the -- in the letter the important things  
8 they obviously recognize that the origin is looking  
9 towards resiliency and functioning out of the crises  
10 we've seen; that they see benefits in certain  
11 situations for the use of clearing. And the larger  
12 question in the letters is really, are the intended  
13 benefits of clearing -- they believe haven't yet  
14 been fully proven to outweigh the potential costs.  
15 So the recommended -- recommendation there, which  
16 makes a lot of sense to us, is look for incentives  
17 to clearing, and then to also be targeted and  
18 incremental as we move along in the early stages of  
19 the treasury clearing regime.

20 So specifically to treasuries in the much more  
21 developed side of the market, we think U.S treasury  
22 repo clearing is a good topic, and that's a clear  
23 case in which there's a good functioning market.  
24 Recent peak volumes have been as high as 750

25 billion. It allows dealers, as we touched upon one

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1 of the issues with the tremendous growth in the  
2 treasury market from only 4 trillion outstanding in  
3 public float in '07, to 24 trillion at the end of  
4 last year, with average daily trading volumes up  
5 only 10 percent versus a 600 percent growth in the  
6 product is the intermediation side and the continued  
7 growth and cap -- capital requirements potentially  
8 even as recently, as some of the comments from Barr  
9 this past week.

10 So the incentive there is against the leverage  
11 constraint that a dealer can have, cleared repo is a  
12 very nice alternative to be able to provide good  
13 functioning, good liquidity to clients without being  
14 up against the leverage constraint. And we think  
15 that this ties into an important topic, which is  
16 looking at this and considering cross margining of  
17 treasury -- treasury cash, as well as treasury  
18 futures that would be beneficial for treasury  
19 futures and just the overall picture -- excuse me,  
20 treasury cash and futures, and really beneficial in  
21 terms of adding resiliency to the market.

22 As we saw in the wake of March 2020, there's  
23 this procyclicality that can develop with margining  
24 and the need to continue to post-margin as -- and as

25 all of the work done into the Treasury RFI, really

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1 draws out that on the runs and treasury futures are  
2 so closely related there's an obvious case there to  
3 look at cross margining to not take these highly  
4 correlated liquid pieces and force them out of the  
5 market to undermine resiliency in times of stress.

6 So we did -- I did bring one chart, chart  
7 number four, here in terms of, you know, additional  
8 things to think about for clearing in terms of  
9 potentially lessons learned.

10 So this is a chart that shows a number of FCMs,  
11 or futures clearing merchants that are holding  
12 customer funds for cleared swaps and it's declined  
13 significantly. And the FSB concluded in a paper  
14 that it was due to high-fixed operational costs, as  
15 well as large capital requirements. So this is  
16 certainly something to think about in terms of both  
17 treasury cash clearing, as well as treasury repo  
18 clearing in terms of concentration of members and  
19 how this can speak to potential systemic risks. So  
20 as the -- you know, the mandate for swaps clearing  
21 has resulted in much larger concentration at the  
22 CCPs, we just think it's very essential that the CCP  
23 risk models, as well as the setting of capital  
24 requirements and the risk government frameworks all

25 work together to minimize financial stability risks.

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1 So, you know, in summary for clearing and  
2 treasuries, we think some of the key considerations  
3 and lessons learned here really, again, start with  
4 this "do no harm" principle as we try to add  
5 resiliency and protect liquidity costs across all of  
6 these points or certain in clearing a major  
7 discussion with loads of detail behind in terms of  
8 what they can mean both operational as well as  
9 capital. Considering concentration risks that could  
10 be built with certain CCPs and how that might impact  
11 financial stability risks and really try to think  
12 about creating incentives, i.e. cross margining and  
13 look at targeted rollouts for things that can help  
14 support resiliency across the market.

15 MR. SEGAL: Hi. So I'm Max Segal. I'm a  
16 Trader on the U.S. Rates Desk at BlackRock. So I'm  
17 going to start by focusing my comments on the idea  
18 of an expansion of cleared repo in the Treasury  
19 market and specifically some of the potential  
20 implications it could have on derivatives liquidity  
21 that might warrant some further investigation before  
22 implementation.

23 So there's really a number of different ways I  
24 could frame these comments, but I think they would

25 all kind of fundamentally rely on the assumption

53

1 that the difference between the current repo  
2 landscape and a mandatory cleared world would have  
3 impacts on funding costs for investors. And while  
4 there are potentially benefits and efficiencies,  
5 like some of the things Brian was talking about,  
6 stemming from things like cross margining that we  
7 could see more of after a move to cleared -- or an  
8 expansion of cleared, I think there's also a debate  
9 that potentially margining requirements and  
10 potentially higher haircuts could on net lead to  
11 higher overall cost of financing for -- for levered  
12 investors. Obviously that would have implications  
13 on the repo market itself, but I also think it's  
14 worth exploring what impact a change in -- in repo  
15 financing costs might have on derivatives markets.

16 So the futures market is an interesting  
17 starting point for a number of reasons. First I  
18 would say futures are an extremely important tool  
19 for our clients' portfolios and their ability to  
20 both gain duration exposure and also hedge various  
21 types of interest rate risk; that's obviously not  
22 just a BlackRock story. Use of interest rate  
23 futures has grown exponentially over the past  
24 decade. Open interest has actually tripled since

1 often asked about from both clients and portfolio  
2 managers is with regard to Future stack depth as a  
3 way of better understanding broader rates market  
4 liquidity conditions. Because certainly, in times  
5 of stress, we've seen pullbacks in futures liquidity  
6 to some extent go hand-in-hand with heightened  
7 market volatility. And so the existence of a liquid  
8 and transparent market for futures is something that  
9 we and our clients deeply value.

10 So bringing these two concepts together, how  
11 might uh an increase in repo funding costs play out  
12 in the futures market. From my perspective there's  
13 a couple of ways to think about this. I think first  
14 it's important to think about the different types of  
15 end users who are active in the futures market.  
16 Levered funds are definitely an important part of  
17 that ecosystem. And although that category of  
18 levered funds is in and of itself diverse, I would  
19 say on whole one of the more common futures trades  
20 entered into by the levered community is the basis  
21 trade whereby a long position in a cash treasury is  
22 hedged using a short position in futures.

23 Now, oftentimes these trades involve leverage  
24 on both legs. So the cash treasury leg is funded

25 in repo and that makes the basis trade extremely

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1 sensitive to inputs like financing costs, especially  
2 given that the expressions themselves are often  
3 playing for relatively small moves to save a few  
4 basis points in an off-the-run bond versus a similar  
5 point on the futures curve. So frequency and size  
6 of basis trades could seemingly be one area where we  
7 could see some sensitivity to changes in the repo  
8 clearing framework. And I would certainly highlight  
9 that as a point worth further investigation. But I  
10 also think what's particularly interesting to  
11 consider is how this might affect other players in  
12 the futures market not just the levered community.

13 So the slide we have posted shows an  
14 interesting and telling dynamic that's taking place  
15 not only right now in the futures market, but has  
16 also played out historically. So this data comes  
17 from the Commitment of Traders report. And,  
18 basically, what this is showing is how asset manager  
19 positioning and levered fund positioning tend to  
20 move in an inverse manner. Set differently, asset  
21 managers and levered funds on net tend to be on the  
22 other side of each other's positions, and you can  
23 clearly see that in the charts; that the light blue  
24 bar on top representing asset manager loans, while

25 the darker blue bars below represent levered funds

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1 net short position over time. And interestingly we  
2 happen to find ourselves in a period of relatively  
3 extended positioning on both sides right now where  
4 this dynamic is particularly acute.

5 So perhaps one way of framing these sorts of  
6 basis trades that asset managers often want duration  
7 exposure at liquid points on the curve, and by  
8 virtue of different risk appetites and different  
9 risk profiles between these two investor types,  
10 namely, levered funds willingness and desire to take  
11 liquidity risk associated with more tactically  
12 owning less liquid off the run treasuries,  
13 levered funds and asset managers absorb each other's  
14 positions quite nicely.

15 So for me, you know, that really means the repo  
16 sensitivity question is broader than just one  
17 investor type. We probably also have to think about  
18 how futures participation and liquidity might be  
19 affected for asset managers, as well in a world  
20 where, you know, the basis trade is affected via  
21 changes to the repo clearing framework. And, of  
22 course, you know, does that allow for more  
23 dislocation across the treasury curve itself with  
24 potentially fewer basis not RV participants active



25 in the market.

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1 So that's one potential framework by which to  
2 think about the interplay between repo financing  
3 costs and the futures market. I think, as with any  
4 complex dynamic, it's certainly not the only one. I  
5 think another question worthy of investigation is,  
6 you know, to what extent futures might serve as an  
7 alternative means of financing. If you consider the  
8 levered investors who are potentially less active in  
9 off-the-run treasury basis, but which nonetheless  
10 use the repo market to finance duration or curve  
11 positions and cash treasuries, you might -- we see  
12 those participants instead opt to express those  
13 levered views via futures if they potentially faced  
14 repo financing friction. In a mandatory cleared  
15 regime what futures essentially become a more  
16 attractive means of financing risk positions and  
17 what might that mean for liquidity and ultimately  
18 volatility.

19 And then lastly there's a separate category of  
20 market participant that's probably also worth  
21 considering just in any conversation about futures  
22 market liquidity. That would be high frequency  
23 trading firms.

24 So if the concept of repo is probably a bit

25 tougher to directly link. High frequency trading

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1 firms, given they tend not to hold positions on a  
2 day -- on an every day basis, or an overnight basis.  
3 So the need for that overnight financing is less  
4 directly apparent. But just given -- you know,  
5 these are leveled market participants who constitute  
6 a significant portion of market trading activity and  
7 contribute to the liquidity environment of futures.  
8 I'd imagine any conversation on changes to broader  
9 market financing probably should include some  
10 thoughts of how it would affect that community's  
11 ability to trade.

12 All of this is essentially getting somewhat  
13 into the weeds on what amounts to an overarching  
14 principle, and that is the relationship between  
15 leverage risk-taking and liquidity. And so while  
16 there may certainly be benefits to broader market  
17 structure and stability via moving to an expansion  
18 of the clear repo framework in the treasury market,  
19 my point here is just to highlight that -- you know,  
20 we want to be conscious of what the effects to  
21 market liquidity especially in the derivatives  
22 market might be so that any implementation would be  
23 made in a way that that produces the greatest  
24 possible benefit for market participants.

25 Really quickly on trace reporting. You know,

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1 first and foremost, I would say we're definitely  
2 proponents for market transparency. There too,  
3 though, I would -- I would just say that I think  
4 it's important that any actions taken towards  
5 increasing transparency are also done in a  
6 thoughtful manner so as not to create potential  
7 liquidity headwinds that might outweigh the  
8 benefits.

9 And to some of Brian's points. I mean, the  
10 block futures market offers an interesting existing  
11 framework from which to view this. Particularly  
12 because in the market -- I mean, we've seen the  
13 incidents of block trades increase in times of high  
14 volatility and stress liquidity. So there is this  
15 sense that market participants do, to some extent,  
16 find they're able to source liquidity under this  
17 framework with as much reporting transparency as the  
18 block futures market. So that's, you know,  
19 potentially a helpful guide post for thinking  
20 through the interplay between transparency and  
21 liquidity. But certainly the two concepts don't  
22 seem to be mutually exclusive so long as there's  
23 thoughtful consideration given to both.

24 MR. CHANG: Good morning. Thank you for -- I'd

25 like to thank Commissioner Pham for leading the

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1 important work of the GMAC, and for Commissioners --  
2 Commissioners Mersinger, Johnson, and Goldsmith  
3 Romero for their time joining us today, and for Lynn  
4 Martin in the New York Stock Exchange for hosting  
5 us.

6 Before I jump into my comments about treasury  
7 markets, I do need to wax nostalgic for a minute  
8 because I actually first started working with Lynn  
9 13 years ago when she was leading an effort to try  
10 and implement cross margining across rates futures,  
11 treasury repo, and interest rate swaps. While that  
12 effort didn't succeed, today I'd argue such an  
13 effort given the unprecedented growth in the U.S  
14 Treasury market, which my prior speakers have  
15 already referenced, and the increased capital and  
16 regulatory requirements, which have led to changes  
17 in business models of primary dealers; it's more  
18 critical than ever for the industry to move figure  
19 out a way to move forward and achieve these changes  
20 and efficiencies.

21 So today I don't have slides, but I plan to  
22 examine key more aspects of the market structure  
23 across, and how they compare and contrast. Across  
24 treasury futures interest rate swaps and cash

25 treasuries and to see what lessons we can draw

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1 across these markets. I'm also going to touch on a  
2 few hot topics, namely the SEC's dealer proposal.  
3 And in a different context, also the catfishers  
4 basis trade that my prior speakers have already  
5 referenced.

6 So first to touch on clearing. Central  
7 clearing has underpinned our futures market since  
8 the beginning of the market. And over the past 12  
9 years, as I would argue, and I think most many  
10 market participants would argue, has dramatically  
11 improved our swap markets reducing systemic risk  
12 increasing investor protection and promoting greater  
13 market resiliency, efficiency, and transparency.  
14 And if implemented thoughtfully, increase central  
15 shared clearing of Treasury cash and repo  
16 transactions, we believe can reduce systemic risk  
17 and meaningfully improve counterparty risk  
18 management, market liquidity, and resiliency. This  
19 is especially important given the dramatic growth in  
20 the size of the U.S. Treasury market.

21 And, you know, again, just anecdotally what I  
22 would say is in my role, I have to sit down with  
23 most of the, if not all of the large dealer banks,  
24 of which we are clients. And I have to admit

25 without fail, nearly every single one of those

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1 conversations has to do with someone senior at that  
2 bank telling us about how regulatorily or capital  
3 constrained they are. And so I want to point out  
4 that it's not just a market efficiency. It's not  
5 just a -- and I agree with my prior speakers that  
6 before a market-wide central clearing requirement  
7 goes into effect, we do need to think hard about the  
8 potential changes in margin and what that has impact  
9 on the market. But I would point out that actually  
10 one of the other issues that we need to face as a  
11 marketplace is capacity, right. And if you actually  
12 look back to March 2020, I'd actually argue one of  
13 the primary issues was that it was actually the  
14 channels of intermediation, the capacity for  
15 intermediation that was challenged. And that is one  
16 of the topic -- that is one of the challenges that  
17 central clearing hope -- we believe can help us to  
18 tackle, and I just don't want to get -- that to be  
19 missed in this discussion.

20 The other point I'd want to make is that before  
21 we can talk about a market-wide central -- central  
22 clearing requirement, we actually need the market  
23 participants to come up with business models so that  
24 all market participants can efficiently even access

25 central clearing, which doesn't exist today. And

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1 that includes through, you know, customer clearing  
2 offerings, right. The success of agency clearing  
3 models in the futures and swap markets, I think,  
4 holds an important model for how to improve client  
5 clearing offerings in the treasury cache and repo  
6 markets.

7 In that spirit, we feel like it's important to  
8 point out it's essential to prohibit certain  
9 practices such as the force bundling of execution  
10 and clearing services that can stifle competition  
11 and impede access to central clearing. And while we  
12 agree that creating incentives to clear is  
13 important and helpful. And, again, we will be among  
14 the first proponents to talk about the need for  
15 increased central, who increased cross margining  
16 across correlated products.

17 I would remind the committee that it actually  
18 took a regulatory mandate for the market to force  
19 the creation of a model where end users even had the  
20 option to clear interest rate swaps. Dealers among  
21 themselves, left to their own devices, figured out  
22 how to clear for nearly a decade before this was an  
23 option -- even an option for end users. And, again,  
24 it took regulatory -- it took a regulatory force to

25 make that happen.

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1 From a trading perspective, you know, I sort  
2 of -- I think we all know the trading futures market  
3 is an all-to-all market, trades on a central limit  
4 order book for the most part, with of course block  
5 transactions, as my prior speakers have noted. And  
6 over the past decade we've witnessed a remarkable,  
7 I'd argue, evolution in the swaps market.

8 And, you know, I started my career on Wall  
9 Street in the late '90s. Sat down on a dealer swap  
10 trading -- interest rate swap trading desk. And I  
11 like to tell people I started trading old-fashioned  
12 way. I was yelling down my line at my broker. I  
13 was yelling at salespeople across the floor. And to  
14 actually see what this interest rate swap market is  
15 today is really quite remarkable. And I think  
16 there's -- I think -- I think it's indisputable that  
17 there have been clear benefits for investors and end  
18 users.

19 You know, the cash Treasury market has  
20 witnessed similar evolutions first with the  
21 inter-dealer market for On The Run treasuries  
22 migrating to electronics central book trading. I'm  
23 actually one of the few people probably still left  
24 in the market that actually remembers when I



25 actually had to pick up a phone to my interdealer

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1 broker to trade on the run treasuries. Actually,  
2 one of the things that terrified me as a novice  
3 trader was mixing up tens hit and tens down because  
4 that was buying and selling. And you have to pick  
5 up the phone and tell your broker what you wanted to  
6 do. But the market structure for U.S Treasury  
7 trading does remain. I'd argue curiously bifurcated  
8 between dealer to dealer and dealer, customer  
9 segments, and between on the run and off-the-run  
10 segments. Of course people have talked about the  
11 different liquidity profiles and the potentially  
12 different market participants in those markets, and  
13 we do believe that. But we actually believe a  
14 diversity of market models should logically exist.  
15 And, you know, many academic studies actually have  
16 noted the potential that more all-to-all tradings  
17 could deliver more all-to-all trading could deliver  
18 more resiliency to the U.S Treasury market. But I'd  
19 argue again this type of evolution in the  
20 marketplace can't occur in isolation; it actually  
21 has to be accompanied by solutions, right, for -- to  
22 tackle the problems of credit intermediation like  
23 central clearing and greater transparency.  
24 You know, one notable observation with respect

25 to U.S. charging markets in March 2020 was that it

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1 actually wasn't just hard to sell; it was hard to  
2 buy also. And so it's important to explore market  
3 evolutions that can further enhance resilient  
4 liquidity and improve intermediation, especially in  
5 times of market stress when traditional channels  
6 frankly are clogged or don't work.

7 From a transparency perspective, the treasury  
8 futures market, and in more recent years the  
9 interest rate swap market, have benefited from a  
10 robust post-trade transparency framework where  
11 market data, including transaction prices and  
12 volumes, are publicly disseminated to investors in  
13 real, or close to real time at low or no cost.

14 By contrast, despite the vital market that the  
15 treasury cash market plays, it remains a distinct  
16 outlier with respect to transparency, not just in  
17 comparison to futures and swaps, but also in  
18 comparison to equities, equity options, corporate  
19 bonds, municipal bonds, and even agency  
20 mortgage-backed securities.

21 The overwhelming amount of empirical evidence  
22 and academic research has demonstrated that such  
23 transparency improves price discovery, deepens  
24 liquidity, lowers transaction costs and enhanced

25 market resiliency. And it's hard for me to believe

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1 that the most important market in the world would  
2 not similarly benefit from more real time post-trade  
3 transparency.

4 The more efficient and competitive U.S treasury  
5 market would not only improve outcomes for  
6 investors, it would also lower funding costs for the  
7 U.S. government and associate burdens on all U.S  
8 taxpayers.

9 You know, we're encouraged that the treasury  
10 announced that last fall's annual conference that  
11 they would begin to develop the contours of  
12 transaction level of -- transaction level reporting  
13 framework, but believe the market would benefit  
14 substantially from a more ambitious approach. We  
15 agree, of course, that social approach needs to be  
16 thoughtful but -- and while we don't disagree with  
17 the first do no harm approach, we do believe that  
18 the market could move much faster than we currently  
19 are.

20 Now, with respect to the SEC dealer proposal --  
21 and I need to be careful here because Darcy did warn  
22 me that we need to keep -- make sure we keep  
23 everything in this committee related to the  
24 derivatives market and not tread on other people's

1 The treasury futures cash charges and U.S.  
2 dollar interest rate swap markets are closely --  
3 closely correlated instruments that make up many  
4 investors portfolios who use these instruments to  
5 mean array of investment, trading, hedging, and cash  
6 management objectives. The one recent SEC proposal  
7 that could severely disrupt trading activity across  
8 these markets by incorrectly seeking to reclassify  
9 certain market participants, certain investors as  
10 dealers, including those that operate an array of  
11 independent investment strategies, which may buy or  
12 sell U.S treasuries for different reasons on the  
13 same day, or those that are simply large and active.  
14 Among others, the proposal would artificially cap  
15 the amount of activity an investment can undertake  
16 in U.S treasuries. We find such a limited oddity at  
17 a time when we actually need to broaden not limit  
18 participation in this crucial market, as my other my  
19 prior speakers have illustrated with -- in terms of  
20 the graphs around liquidity challenges.

21 You know, lastly I want to tackle this topic of  
22 the basis trade. And I appreciate the fact that  
23 actually both of my prior speakers pointed out and  
24 framed the context of Treasury basis trading as

25 something which is a necessary and liquidity

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1 enhancing part of the futures market, and frankly of  
2 the entire race ecosystem. Unfortunately, in  
3 certain circles, this has been framed in other  
4 contexts as something incredibly risky as something  
5 that's mark -- potentially market destabilizing.

6 And I think a lot of context here has been missing.

7 So I kind of want to move back -- go back to  
8 first principles here for a minute. For every buyer  
9 of a futures contract there has to be a seller. So  
10 typically as, again, my prior speakers have  
11 helpfully noted, there's outsized demand for long  
12 treasury futures positions, which creates a pricing  
13 disparity between the futures contract and the cash  
14 market. And this is where the cash treasury basis  
15 trade plays an important role in seeking to  
16 normalize prices.

17 In general, participant in the basis trade in  
18 U.S treasury market is short the future and is, in  
19 fact, long in underlying cash U.S treasury. In the  
20 absence of the marginal buyer -- another marginal  
21 buyer for U.S treasuries, the funding costs of the  
22 U.S. government and the burden on taxpayers would be  
23 higher without the presence of these market  
24 participants, and the use of futures by hedger's,

25 asset managers, pension funds and others who depend

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1 on the -- depend on the relationship between charged  
2 futures and cash markets to remain relatively stable  
3 and efficient. Without market participants who  
4 are -- who are implementing the cash futures basis  
5 trade -- there's no way to keep these relationships  
6 in line. And the usefulness of Treasury futures for  
7 those marker positions looking to hedge or track U.S  
8 treasury -- to track the U.S. Treasury cash market  
9 would be greatly reduced.

10 You know, another related topic I'd like to  
11 tackle something, which has gotten some attention.  
12 And, again, unfortunately, we feel some headlines,  
13 which don't have the proper context, is this topic  
14 of zero haircut margin for repos. In isolation and  
15 without the proper context, it sounds like something  
16 incredibly risky. Zero haircut, infinite leverage;  
17 that must be incredibly dangerous. Well, again,  
18 let's consider the context in which this repo  
19 occurs. Basis trade, again, has two legs. futures  
20 leg and a cash leg.

21 The futures leg of the trade essentially  
22 cleared. There's both initial margin and variation  
23 margin posted to the exchange. For hedge funds and  
24 users, this will generally be through the FCM,

25 generally of a large bank. That futures leg has

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1 outright interest rate risk. For that bank that  
2 serves as FCM it is actually risk reducing for the  
3 repo to be housed at the same institution that  
4 clears the futures. So for the repo and futures to  
5 be together is actually a counterparty and market  
6 risk reducing transaction for the institutions in  
7 question. And remember variation margin is still  
8 posted for both legs of the trades.

9 So, again, I point out, you can clear outright  
10 futures -- and I sort of point out that actually  
11 clearing the outright futures and providing the repo  
12 for the bonds for a basis trade related to that  
13 futures position is actually less risky for that  
14 institution. So why would you tie up more capital  
15 for a less risky position.

16 Again, when talking about zero haircut repo and  
17 isolation it could make good headlines. It's a good  
18 scare tactic. But, actually, if you understand the  
19 context in which these trades occur, it's actually  
20 generally part of a risk reducing transaction for  
21 the institutions in question, and that's why the  
22 market actually allows this to even happen.

23 So look. This concludes my remarks. I thank  
24 you for your time, and I'll hand the floor over to

1 MR. GILES: Hello. Okay, firstly, thank you  
2 for inviting me. I'm a bit different. I'm the odd  
3 one out on this panel because, you know, obviously,  
4 I'm less intelligent and good looking than my fellow  
5 panelists.

6 But also we don't provide liquidity or use  
7 liquidity in the treasury or the treasury  
8 derivatives markets. So who are Traditions --  
9 Tradition is a global market in Dimitri specialized  
10 in wholesale markets across all major asset classes.  
11 I was the guy that Isaac was showing that,  
12 basically, in the '90s. I was there. I said, don't  
13 worry.

14 We run lots of regulated venues, and we have a  
15 lot of experience of that particularly recently --  
16 well, the last ten years with SEF. Tradition in New  
17 York occupies -- occupies a market leading position  
18 in liquidity platforms for dollar GC repo, Treasury,  
19 and dollar interest rate markets. Due to things  
20 like the SEF tradition as had to become an expert in  
21 operational and technical market structures as they  
22 relate to pre-trade, and trade, and post-trade  
23 functions. Both have been mentioned here. They  
24 fall into two groups, clearing and reporting.



1 liquidity are not providers or users of liquidity.

2 An increasingly cross-market aggregators of

3 liquidity, and I think that's important to mention

4 as per my other panelists.

5 So what have we learned about tradition. The

6 two -- the two additional functions that come with

7 regulation that mainly came with the SEF were

8 clearing and reporting, and they're very broad

9 subjects, but they basically come under those

10 headings. They were successfully implemented and

11 seemingly beneficial, but not one-size-fits-all.

12 All markets have their own bakeries and differences

13 and stuff like that.

14 What did we learn from the implementation; it

15 takes time. Any process change or anything that's

16 been in place for a number of years takes time to

17 change and time to implement and that -- and that

18 must be recognized. You can't -- you can't just

19 flick a switch. It takes time to build, but when

20 it's built, it has to be efficient and quick. I

21 think Isaac mentioned the speed issue, and I think

22 that's important. Plus, it must be robust. We've

23 all talked about trillions of messages and stuff

24 like that.

1 there's been many mention of cross margining across  
2 these conversations.

3 So one new risk that we saw at SEF was CCP  
4 basis, right. It's -- it's highly linked. Not  
5 necessarily saying -- linked, and the market had to  
6 find a solution to CCP basis. Any new process  
7 that's put in place also has to be able to change,  
8 and we have a great example of this. So we put SEF  
9 in place in a libel world. Over the ten years of  
10 SEF, and particularly last month, we saw the end of  
11 LIBOR, something I never thought I'd experience.  
12 But we moved from LIBOR to SOFR. So the regulatory  
13 structure had to cope with a wholesale change from  
14 one type of market to another type of market.  
15 Interestingly to a treasury market, which means much  
16 more correlated to the treasury market.

17 So my speech is less about the liquidity; more  
18 about the implementation of the -- the venues and  
19 stuff like that. And that's what tradition do, we  
20 run regulated venues. Increasingly club-based,  
21 auction-based, but we still have voice brokers that  
22 ISO used to scream about.

23 In my view, to help enhance the liquidity, it's  
24 all about the plumbing. If you have good plumbing

25 and it's built well and stuff like that, these

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1 structures can be used to enhance liquidity. But  
2 it's important through situations like this that we  
3 look at all of those things. What you don't want to  
4 do is put a structure in place that inhibits  
5 liquidity. Everything should be about increasing  
6 liquidity because it's the most important one.

7 That's my very brief conversation on this.

8 I'll hand back to the floor. Thank you.

9 CO-CHAIR BRADBURY: So we have a little time  
10 for questions. We're going to cut it short a bit  
11 just to try to get us back on schedule. But,  
12 please, you have the floor. Can you find a  
13 microphone?

14 MR. MUELLER: Yeah, my name is Eric Mueller. I  
15 run Eurex Clearing in Frankfurt, so that's a major  
16 global CCP, can relate to many of the points that  
17 were made. There is not a discussion in Europe on  
18 necessarily minatorily clearing repo, but there's  
19 clearly a market trend for many of the reasons that  
20 were outlined by the sell side and also by the buy  
21 side today. So this can be characterized as by far  
22 our fastest growing business for many of the  
23 underlying reasons here.

24 What I wanted to emphasize is what Isaac Chang

25 said on access to the buy side. I think -- or

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1 access off the buy side to clear the drupe. I think  
2 that has to be also seen in relation to the  
3 post-Lehman regulatory reform. So, essentially,  
4 these regulations have dragged many more of the buy  
5 side into exchanging IM and VM, i.e., doing a daily  
6 mark to market, which is one of the central features  
7 of the safety mechanism of what a clear -- a  
8 clearinghouse introduces and provides for systemic  
9 stability, and IM, which covers the future market  
10 moves.

11 Now, if more and more people from the buyer  
12 side apply these risk managed -- successful risk  
13 management instruments, that we know from the CCP  
14 world, there is a difference. The traditional  
15 clients of the CCPs, they have full access to  
16 liquidity. So they can't -- they can take high  
17 quality securities and pledge that to their local  
18 central bank so they always have access to  
19 liquidity; that's not true for the buyer side who  
20 mostly relies on bilateral repo agreements with the  
21 sell side.

22 So also against that background, I think it's  
23 critically important that we work, not only in  
24 Europe, but on a global basis on these access models

25 for the buyer side. And I do think cleared repo

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1 plays a great role also in the -- countering that  
2 liquidity risk that we have now put on the buy side  
3 by getting them to apply the risk tools that  
4 actually change what used to be a credit risk into  
5 more of a liquidity risk. So what used to be a  
6 credit risk on a buyer side -- you know, positions  
7 move and then the sell side firm would absorb this  
8 in the form of a credit risk. Now you're asking  
9 people to be more real-time in marking to market the  
10 risk into putting up initial margin to cover also  
11 future market moves.

12 So that's why we need to think about how the  
13 buy side has better access to liquidity and cash,  
14 and can use and utilize the securities that they  
15 have and, therefore, this is another element of the  
16 debate why this work -- the CFTC and the Commission  
17 is doing is of critical importance I think for the  
18 global stability of the financial system.

19 CO-CHAIR BRADBURY: Thank you, Eric.

20 I know the -- one of the recommendations at the  
21 last GMAC was to look at the collateral requirements  
22 that were being imposed in the -- in the  
23 soon-to-be-cleared bilateral swaps market because as  
24 it was expanded to the buy side, those changed the

25 way that people had been posting margin previously.

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1 And, in fact, have led to some liquidity concerns.

2 And then we all saw the impact in the European

3 energy markets when you had non-financial end users,

4 utility companies and others really struggling, and

5 the European policymakers decided to change their

6 collateral rules and allow bank lines of credit,

7 shifting the credit risk back to the dealers who

8 know their customers. So it is a very interesting

9 question.

10 And so for those of us who, like, when we can,

11 to clear products, it obviously reduces risk.

12 Thinking about how it works differently for

13 different kinds of market participants is critical.

14 Thank you.

15 Other questions or comments from the panel?

16 Please.

17 MR. PERKINS: Hi, my name is Chris Perkins.

18 I'm the President of CoinFund. We're a Web3 native

19 registered investment advisor.

20 And once upon a time, I ran an FCM. One of the

21 things that jumped out at me was a colleague from

22 JPMorgan showcased the precipitous decline in FCMs

23 in the last decade. And then my colleague from

24 Citadel underscored the concerns around intermediary

1 And so one thing I wanted to point out is this  
2 is a concern that I think we need to evaluate as an  
3 industry. Because, particularly, whether it's going  
4 into cleared repo or going into new products where  
5 end users now like myself are looking to hedge and  
6 manage risk -- you know, we live in an environment  
7 where intermediaries are mandated under law and  
8 regulation, and if we're unable to gain capacity and  
9 intermediaries are solely declared -- are quickly  
10 declining, you know, how do we work as an industry  
11 to bring that capacity back.

12 So I wanted to underscore that through line  
13 between those two comments, whether it's cleared  
14 repo or other new products and it's a concern that  
15 we continue to have. Thank you.

16 CO-CHAIR BRADBURY: Thank you.

17 Other --

18 MS. KARNA: Thanks, Darcy. My name is Angie  
19 Karna. I am the -- for the markets businesses at  
20 Nomura Securities in New York.

21 I also wanted to just echo a couple of points  
22 that several speakers made that I think is really  
23 important for the CFTC to continue to focus on.

24 We've talked about clearing as being risk

25 mitigating, but it's important to note, as a few

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1 speakers highlighted, about the interrelationship  
2 between capital requirements and risks at the FCMs,  
3 as well as the risks that are inherent in those  
4 clearinghouses as more and more products, including  
5 treasuries, are going to be funneled through them.

6 So I just urge the CFTC, as you continue to  
7 focus on looking at your frameworks -- as more and  
8 more things are going through the clearinghouses,  
9 please keep an eye on looking at the risks inherent  
10 in those clearinghouses as well.

11 CO-CHAIR BRADBURY: Thank you, Angie.

12 And thanks to the panelists. I had cautioned  
13 them not to make recommendations specifically or  
14 draw conclusions. Their goal is to try to feed the  
15 work of the subcommittees, but I think you're  
16 already seeing a few themes connect. And you know  
17 why I had tradition on, which is, I also believe  
18 it's all about the plumbing. You know, it's got to  
19 be very practical at the end of the day.

20 As you know, I'm on the ISDA board, and when we  
21 were going through phase five and phase six of  
22 clearing, the most fundamental stuff cropped up.  
23 Like, Oh, Bank of New York is the custodian.  
24 They're not on the ISDA create system. No one can



25 do their contract. You know, very practical things

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1 matter, and that took a really long time. And so I  
2 think for those of us who are excited about the idea  
3 of enhanced access to clearing, and over time really  
4 creating a robust market. I think the idea of being  
5 clear with our regulators about, what are the things  
6 we need in order to accomplish that is going to be  
7 incredibly important, and I think the data that my  
8 panelists provide is also really welcomed. So we  
9 hope that helps the subcommittees.

10 And now I think we get to have a break.

11 FEDERAL OFFICER RAIMONDI: So, yes, at this  
12 time, the GMAC will take a ten-minute break. It is  
13 10:46, and we will return at 10:56. Thank you,  
14 everyone.

15 (A brief recess is taken.)

16 FEDERAL OFFICER RAIMONDI: Okay, welcome back,  
17 everyone. It is now 11:05 a.m., and I'm calling the  
18 meeting back to order.

19 CO-CHAIR BRADBURY: Great.

20 CHAIR HONG: We will now begin our second panel  
21 for the day. Swap block implications on market  
22 structure, where we will hear from industry experts  
23 about the CFTCS swap block trade thresholds and  
24 volume cap sizes and their impact on market

1 During this panel we will hear from GMAC member  
2 and Global Head of Public Policy at ISDA Stephen  
3 Kennedy, followed by GMAC Global Market Structure  
4 Subcommittee member and Senior Vice President of  
5 Portfolio Management at Pimco, Tim Crowley. And  
6 GMAC Global Market Structure subcommittee co-chair  
7 and Director and Head of U.S Market Structure of the  
8 Global Trading Group at BlackRock, Michael Winnike.  
9 And guest speakers Tyler Wellensiek, Managing  
10 Director and Global Head of Rates Market Structure  
11 and Business Strategy at Barclays; Adam Lister,  
12 Interest Rate Swaps, Electronic Trading Product  
13 Manager of North America Bloomberg, and Bhas  
14 Nalabothula, Head of U.S Institutional Rates at  
15 Tradeweb.

16 We're going to structure our discussion today  
17 into four segments. First, we will have an overview  
18 of swap blocks and how they impact market  
19 activities.

20 And then, second, we will welcome market  
21 participants to share their insights on the swap  
22 market -- swap markets since block rules have been  
23 in effect over the past decade.

24 Thirdly, we will welcome our SEF

25 representatives to give some observations as

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1 operators of swap execution facilities.

2 And, lastly, we will ask our market  
3 participants to share their thoughts and  
4 perspectives on the implications of the new block  
5 thresholds, which are set to take place -- take  
6 effect in December of this year.

7 Steve, please begin. You have the floor.

8 MR. KENNEDY: Thanks. Thanks, Amy, and hi,  
9 everyone. And thanks to Darcy as well, and  
10 Commissioner Pham for -- for sponsoring the  
11 committee. And Commissioners Johnson and Mersinger  
12 for your support of the important issues we're  
13 taking on.

14 Given our location, we've heard a little bit  
15 about history this morning, and I'm going to stay  
16 true to that theme by level setting our discussion  
17 about blocks and give some history of the -- of The  
18 rule and regulation. I'll Define it, provide the  
19 rationale that the CFTC gave in setting it, and talk  
20 about some recent changes.

21 So if we can go to the first slide. The second  
22 slide. Perfect.

23 So what are blocks. Block thresholds are  
24 important for two reasons. One, it's a level at

25 which a trade qualifies for a delay in real-time

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1 reporting. Fifteen minutes up to a couple hours.

2 Two, because it determines whether or not if a

3 swap is subject to trade execution requirement

4 whether the swap has to trade on a SEF or not, even

5 though it will still have to trade according to the

6 SEF's rules.

7 In addition to block trades, we also want to

8 talk about volume cap sizes. And a volume cap size

9 as the term infers, is the maximum level at which

10 the trade is publicly reported. So if the cap size

11 is say 50 and it's reported at 55, then it's

12 reported as 50 plus.

13 So let's go back in time a little bit and talk

14 about the block rules. Ten years ago I -- yeah, ten

15 years ago in 2013, the Commission finalized the

16 rules that established the block thresholds and the

17 volume caps. They set it initially at a 50 percent

18 notional amount. The idea was, then, after SDRs had

19 collected data, the thresholds would go up to 67

20 percent for the block thresholds, and 75 percent for

21 the -- for the volume cap. Nothing was done from

22 2013 to 2020. And in 2020, the Commission proposed

23 and finalized rules that amended the swap categories

24 that constituted or that established the block

25 thresholds and volume caps and said that the new

85

1 thresholds would come into effect in December of  
2 this year, which is why the issue is so important to  
3 us today.

4 So let's go to the next slide.

5 So what is the methodology. The methodology is  
6 confusing, and the definition you're reading won't  
7 help. But simply stated -- simply stated you take  
8 all the trades, you total them up until you get to  
9 67 percent and that's the threshold for determining  
10 what the block is.

11 Why are the blocks being established by the  
12 CFTC. You can see here the rationales. And I think  
13 the second bullet is probably the determinative one.  
14 It says, "The approach would ensure that market  
15 participants have a timely view of a substantial  
16 portion of swap transactions and pricing data to  
17 assist them in determining inter alia the competitive  
18 price for swaps within a relevant swap category.

19 So the idea was to try to find the proper  
20 balance of the appropriate balance between providing  
21 price transparency but maintaining liquidity and  
22 not -- not exposing counterparties to undue risk for  
23 the block size above that level.

24 So the next slide. These are the current

25 thresholds. And you all -- you can also see listed

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1 the current categories. This is for interest rate  
2 groups. This is for interest rate swaps. Super,  
3 major, major, and non-major. And the thresholds  
4 differ for each of them by tenor.

5 Can we go to the next slide. And we'll see how  
6 they've changed. So this is how they're changing.  
7 They've gotten rid of the four categories of super,  
8 major, major, and non-major, and they've done it by  
9 individual currency. And I know there's a lot of  
10 data on this slide, but I want to call your  
11 attention to the -- to the columns U.S. dollar. You  
12 can see that the thresholds for U.S. dollar interest  
13 rate swaps are increasing between 38 and 288  
14 percent, depending on the tenure, 38 and 288  
15 percent. And the three to six month tenor threshold  
16 goes down by 8 percent. And you can see this  
17 variability and this wide range in all the  
18 currencies, and this chart also reminds us that this  
19 is a global issue because all these currencies are  
20 involved.

21 If we go to the next slide. This is the change  
22 in the volume cap size. Again, just looking at the  
23 U.S. dollar swaps, the volume caps increase in every  
24 category, in every tenure category from 33 to 353

25 percent. So that's quite a change from the current.

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1 Practice.

2 And then the next slide. This is the current  
3 and the proposed thresholds for credit default swap  
4 indices, and you can see again the change for --  
5 every type of index is from 63 to 218 percent. So a  
6 very large variability between today and what  
7 they're going to be in December 4th, 2023.

8 CHAIR HONG: Steve, thanks for laying out the  
9 groundwork and helping the committee level set on,  
10 you know, just what the thresholds are and the  
11 impact that they have on the markets.

12 With that, I'll hand it over to the market  
13 participants to share insights on market dynamics,  
14 since swap block rules have been in effect over the  
15 past decade. Tim, Michael, and Tyler, thank you.

16 MR. CROWLEY: Hello, my name is Tim Crowley.  
17 I'm a portfolio manager and trader at Pimco on the  
18 U.S rates desk.

19 I'm going to go over how the swap market and  
20 liquidity has evolved in the last ten-plus years,  
21 and then talk about the regime that we're in  
22 currently.

23 So in the last ten-plus years, swaps have moved  
24 from bilateral to cleared. SEFs have gone from

25 basically non-existent to the preferred form of

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1 execution. There's been an emergence of different  
2 curves for different clearinghouses. I even see the  
3 LCH basis swaps have moved from LIBOR to SOFR.  
4 Markets in general have become more electronified.  
5 Liquidity provision has evolved and banks are  
6 generally warehousing less risk than they used to,  
7 at least relative to the size of the market.  
8 There's been a migration of market makers and banks  
9 to hedge funds. There's been an emergence of high  
10 frequency proprietary trading firms populating all  
11 the all markets. We've had multiple iterations of  
12 quantitative easing and quantitative tightening.  
13 And there's been different realized volatility  
14 regimes.

15 Can we hit the next slide, please.

16 So for the context of this discussion, we're  
17 currently in a regime of high vol and low market  
18 depth. If you take a look at this graphic, it plots  
19 daily volatility implied by the one month tenure  
20 swaption market, which is the blue line, versus the  
21 depth of the current tenure treasury inner dealer  
22 market, which is the orange line. The depth of  
23 market is the average notional size available. The  
24 top three levels of the current tenure treasury club



25 measured over the same hours each day. Since

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1 treasuries and futures, for that matter, have  
2 central limit order books where participants, both  
3 liquidity providers and end users populate bids and  
4 offers, we have a robust data set for market depth.

5 Now, I know we're here to talk about swaps, but  
6 swaps don't trade on a central limit order book;  
7 they traded in an RFQ market, so we don't have a  
8 data set to look at for depth of marketing swaps.

9 But tenure treasuries and tenure swaps exhibit very  
10 similar liquidity characteristics on a daily price  
11 movement. Tenure swaps have a 0.997 correlation to  
12 tenure treasuries and, in general, when a swap  
13 dealer wins a client inquiry, their first order of  
14 business is to usually hedge their duration, which  
15 is likely a flow into the cash treasury or futures  
16 market.

17 So if we're looking at depth of market where  
18 it's observable here, looking at cash tens, it's an  
19 excellent proxy for liquidity and swaps. In  
20 general, market depth is a function of volatility.

21 When the blue line, daily volatility is low, the  
22 orange line, market depth is high, and vice versa.

23 At any given point in time, products that have  
24 higher realized vol generally have lower market

25 depth than products that have lower realized vol.

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1 For instance, during the fed's zero interest rate  
2 policy, the front end of the curve exhibited much  
3 deeper market depth than the back end of the curve.  
4 Simply there was just less volatility in the front  
5 end. Over the last year and a half, though, that's  
6 basically flipped. The front end has exhibited more  
7 volatility and has experienced a reduction in depth  
8 of market more pronounced than the back end.

9 Across the board, though, volatility is up and  
10 market depth is down since the beginning of this  
11 hiking cycle. And you can see in current tenure  
12 treasuries, which are one of the most liquid  
13 instruments in the U.S rates market, that the depth  
14 of market is at its shallowest regime that we've  
15 seen in the last decade.

16 I'm going to hand it over to Michael.

17 MR. WINNIKE: Great, thank you.

18 And so when evaluating the way that the markets  
19 have changed following the implementation of the  
20 initial block sizes and SEF trading regime, I think  
21 we'd like to just start that we are very pleased and  
22 big proponents of SEF trading, in general. It's  
23 been a big success for clients in our markets. And  
24 in particular, the electronification of swap trading

25 has had material benefits. It's led to more

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1 efficient workflows with lower operational risk,  
2 it's made it easier to put dealers into competition  
3 and the electrification of markets has also had  
4 secondary effects where it's allowed dealers to be  
5 able to engage in auto quoting practices, eventually  
6 stream prices enabling faster execution and greater  
7 pre-trade price transparency. We're also benefiting  
8 from post-trade price transparency in the SDR today.

9 So I wanted to put that out to frame that this  
10 isn't a question we're considering around block  
11 sizes between no transparency and some transparency.  
12 We're big proponents of transparency and the  
13 utilization of the SEF.

14 It really gets back to the point that, I think  
15 that's even raised, which is how do we balance the  
16 competing interests between an incremental increase  
17 in transparency and that benefit to markets, against  
18 the potential impacts to block liquidity, and how  
19 are those balanced. And those really happen in a  
20 particular market context.

21 And if we look at the original SEF proposal,  
22 that balance was struck with a particular set of  
23 market data, market participants, a liquidity  
24 environment that is now over a decade old. And so,

25 you know, looking at these two factors as a context

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1 for how we should set block sizes moving forward, I  
2 think Tim's points are really important, then when  
3 we look at liquidity itself, we are in a constrained  
4 and higher volatility environment and that does  
5 impact block liquidity and the impacts of  
6 transparency.

7 If you take a trade with a notional of \$100M --  
8 if markets are twice as volatile, that trade carries  
9 twice as much risk and could have significantly more  
10 market impact when it's traded and when dealers need  
11 to go hedge. And so taking those liquidity  
12 environment -- the volatility and liquidity  
13 environment we're in to effect, I think should shed  
14 light on where we should set block sizes moving  
15 forward and I think could show that resetting these  
16 block sizes, which are not, you know, incremental  
17 changes but potentially massive changes, you know,  
18 200, 300 percent changes in some cases, could have a  
19 significant impact on block liquidity.

20 And I think that this chart here is really just  
21 building off of exactly what Tim had been shown in  
22 the -- the cash markets and that's the decrease in  
23 cost top of book liquidity here in futures markets,  
24 which are again highly correlated.

1 equation, which is transparency. So where are we  
2 with transparency today, and that's a very positive  
3 story. So we have access to the SCR today. And the  
4 vast majority of swaps traded today on a ticket  
5 basis are traded below the block size and subject to  
6 real-time reporting and RFQ to three requirements.

7 But there have been other advancements in  
8 transparency as well. We have access to pre-trade  
9 price transfer -- pre-trade price transparency via  
10 dealer streams. And this slide is just an example  
11 of what type of market information is out there to  
12 traders when they consider where to go execute a  
13 trade or how to execute it. It's no longer the case  
14 where you have to go and disclose your size  
15 direction to a dealer first. We are now getting  
16 indications from dealer community, for at least  
17 social sized trades, about two-way markets across,  
18 you know, a broad number of products and across a  
19 broad range of dealers.

20 So -- and I think when we look at our own  
21 trading activity, in particular, you know, we  
22 already have, for example, in the one- to two-year  
23 band of U.S rate trades -- you know, 97 percent of  
24 our tickets are already sub -- are already below

25 block size, you know -- and if we were to move to a

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1 different block size regime that's reported --  
2 that's being proposed, 100 percent of those trades,  
3 right, would be subject to -- would be below the  
4 block size. And while that's a small percentage of  
5 our book, those do have real impacts that I think  
6 we'll discuss in more detail a little bit later.

7 But I guess I would love to see further study  
8 about how much incremental benefit really comes from  
9 this marginal number of additional trades that will  
10 be reported where we know that there could be a real  
11 cost in terms of liquidity to those trade or end  
12 users.

13 MS. WELLENSIEK: Great. Thank you, Michael.

14 Tyler Wellensiek from Barclays. I'm going to  
15 echo a few things that Michael pointed out.  
16 Firstly, I think it's really important to recognize  
17 the success of the broader set of Dodd-Frank reforms  
18 of which block sizes are just one part. So these  
19 post-financial crisis reforms added transparency via  
20 SDR in the United States, mandated clearing, and  
21 promoted trading on regulated exchanges.

22 The collective effect of these reforms had a  
23 net positive effect on the market for customers and  
24 the market more broadly. SEF trading, in

25 particular, delivers many benefits to all

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1 participants by improving workflow efficiency,  
2 reducing credit and operational risk through near  
3 instant clearing of trades, and supporting the sell  
4 side and providing better liquidity to customers  
5 through the additional transparency available.

6 I'd also point out that SEFs have proven  
7 successful in their attractiveness as a global venue  
8 of Choice by many UK and EU clients post-Brexit.  
9 For example, looking at benchmark European swaps  
10 data from Ostra found that over 50 percent of  
11 volumes were traded on U.S SEFs as of March 2023;  
12 that's up from 20 prior to Brexit implementation in  
13 January 2021.

14 That said, I did want to comment a little bit  
15 about the importance of different execution  
16 protocols and flexibility for clients, as we think  
17 about where we are and where we're going. Unlike  
18 many exchange traded markets, the swaps market  
19 remains a principal risk-taking market, versus an  
20 agency model.

21 In a principal market, it is important for  
22 clients to be empowered to have the flexibility in  
23 the manner in which they transfer risk away from  
24 themselves and to their liquidity provider. For a

25 large majority of transactions in the vanilla swap

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1 market, an RFQ to multiple model works exceptionally  
2 well. SEFs have also innovated to provide  
3 additional execution protocols to meet client needs  
4 such as requests for market protocols and  
5 click-to-trade functionality.

6 However, for larger risk transactions, as  
7 Michael alluded to, the ability of clients to  
8 leverage their own market expertise to work  
9 discreetly with the liquidity provider of their  
10 choice is critical. Examples of such use cases  
11 include a pension fund making a major asset  
12 allocation into the rates market, or a fund manager  
13 looking to transact risk in tandem across multiple  
14 client portfolios. In doing, so clients may be able  
15 to ascertain which dealer has an offsetting position  
16 or acts that would result in tighter pricing than an  
17 RFQ to a neutral dealer might return. Clients can  
18 have also -- can also have more detailed pre-trade  
19 communications and discussions with their liquidity  
20 providers on market conditions and execution  
21 strategies, which is even more important given the  
22 current market conditions and the higher volatility  
23 that have been noted so far.

24 Other major global regulatory frameworks such



25 as MiFID support this functionality in flexibility

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1 in their venue trading rules without prescribing a  
2 certain number of quotes are received by clients.  
3 Rather, they leave to the buy side. The expert  
4 judgment on the trading protocol that's appropriate  
5 for the trade being done provided clients have a  
6 framework for best execution in place.

7 Thanks, Amy.

8 CHAIRMAN HONG: Thank you very much for -- for  
9 your observations.

10 I now welcome representatives from Bloomberg  
11 and Tradeweb SEFs to share their perspectives.

12 Adam and Bhas, the floor is yours.

13 MR. LISTER: Thank you.

14 Well, good morning, everyone. Yes, Adam  
15 Lister. I'm the swaps electronic trading product  
16 manager and apparently plumber at Bloomberg SEF.  
17 Thank you very much Commissioner Pham and fellow  
18 Commissioners for giving me the opportunity to  
19 present Bloomberg's observation on block size  
20 trading. And thank you also to Amy for coordinating  
21 this particular panel.

22 Briefly, I think it's worth taking a step back  
23 to look at our journey over the past decade.  
24 Bloomberg SEF was built on the pillars of pre-trade

25 transparency, standardized pricing, impartial access

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1 to dealers, ease of execution, and their  
2 hyper-efficient post-trade processing. These  
3 standards are very much the baseline now. But  
4 having worked at a swap dealer through the period of  
5 implementation ten years ago, I could assure you  
6 that each of these ideas was revolutionary at the  
7 time, or at least felt that way, for a historically  
8 bespoke bilateral marketplace. And it's testament  
9 to the CFTCs foresight and great efforts that the  
10 SEFs have indeed been one of the great successes to  
11 come out of the Dodd-Frank Act.

12 The launch of the SEFs was a story very much  
13 linked to the trade execution requirement, which  
14 followed shortly after. But while the early months  
15 and years may have been first and foremost about  
16 compliance with the law, what we see now in our  
17 customer uses patterns is the SEF as an unprompted  
18 means of choice for moving risk effectively. Not  
19 having a clearing mandate until Q4 last year, nor  
20 indeed a trading mandate until next month has not  
21 stopped SOFR swaps replacing the volume seen in  
22 dollar LIBOR. From four currencies traded in the  
23 first few months of operation, to now some 27  
24 offered.

25 And, yeah, here we see that by percentage of

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1 map volumes transacted long before SOFR first and  
2 SONIA first, the trend has been down for -- as a  
3 percentage of overall activity as new currencies  
4 have come online. But also I think in no small part  
5 due to the rise of trading of offsets and  
6 compressions via list trading functionality, which  
7 doesn't fall within the scope of map, but I think as  
8 a prime example of the workflow benefits of SEFs for  
9 optimizing cleared portfolios that our customers  
10 have seen.

11 If we -- if we focus on dollar IRS mat  
12 instruments only to limit an analysis to dollar  
13 LIBOR over the years, we see a trend down in the  
14 percentage of notional volume transacted in tickets  
15 over the existing block sizes, which obviously would  
16 become more pronounced as the block threshold  
17 increase. And this is -- you see is broadly in line  
18 with the increased volatility, which is the green  
19 line you see on the graph there.

20 What's more, we see an interesting trend where  
21 we look at the request for quote data for dollar IRS  
22 MAT outright inquiry that the number of dealers in  
23 comp appears to have flatlined at just above four  
24 for below block sizes, but the data suggests that

25 over time block size outrights, while representing a

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1 smaller percentage of the overall population, have  
2 seen an increase in the number of dealers in comp  
3 through to 2019 and then a fair amount of noise, I  
4 would suggest, because of the -- you know, the move  
5 away from LIBOR and into SOFR. So, yeah, the  
6 increasing number of dealers in comp over block size  
7 but pitted against a decreasing number of block size  
8 trades overall.

9 As sapphire observations are made with the data  
10 we see -- and here while it's clear to us that SOFR  
11 activity is very large on SEF, and we're supportive  
12 of the recent MAT determination, it's difficult to  
13 observe whether the trades going through off  
14 facility are in comp or non-comp. And how the  
15 incoming mandatory to three process will affect bid  
16 offer spreads and ability to move risk efficiently  
17 with the proposed threshold increase. An area where  
18 my fellow panelists will be able to offer their  
19 analyzes.

20 Once MAT is implemented next month, the data  
21 surrounding activity with present thresholds will, I  
22 think, become immediately more meaningful, and I  
23 look forward to working with the industry in the  
24 next phase of market development on that front.

25 Also, the graph you see on the screen now -- I

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1 wanted to show an equivalent depiction of CDS MATs  
2 on SEF. Where we see that the block activity over  
3 time has remained fairly even, at least in contrast  
4 to the interest rate swap market.

5 The credit default swap market has not faced  
6 the same dynamics of changing indices obviously that  
7 we've seen in the interest rate swap market.

8 And in passing I'll -- I don't have a graph for  
9 this. But the over block size in CDs the number in  
10 comp has kind of increased but only a small amount  
11 from maybe one and a half dealers to two dealers.

12 I will know note also that volume that I we had  
13 on the screen includes CDs roles. So I think it's  
14 probably important to strip that away to really  
15 understand the effect of block.

16 And then just to finish a few summary bullet  
17 points for the subcommittee to consider, I'll hand  
18 over to Bhas.

19 MR. NALABOTHULA: Thanks, Adam.

20 And thank you, Commissioner Pham. Thank you,  
21 Amy, for hosting today's panel. It's great to be  
22 here with this group of market participants and  
23 venues and clearinghouses to discuss this important  
24 topic.

25 So Tradeweb's perspective in the block sizes,

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1 you know, debate is really shaped very closely with  
2 our conversations with our market participants.  
3 This has been a very busy year for the interest rate  
4 service market in the U.S. with the end of LIBOR,  
5 with the approval of Tradeweb SEFs MAT filing to  
6 kick in the MAT requirements for SOFR and SONIA on  
7 August 5th, and then obviously with the potential  
8 block changes in December.

9 You know, our discussions with market  
10 participants shape our views on here. And,  
11 specifically, today, I'll make a few points on some  
12 of those conversations, and also where we have a  
13 unique perspective, which is the data of the trading  
14 that we see on our platform. Tradeweb SEF in  
15 largest SEF in terms of swap interest rate, swaps  
16 notional traded. So we feel, you know, we have a  
17 great perspective to share here today.

18 Before diving into the data, I want to also  
19 reference a couple other points that were made.  
20 Tyler, you had referenced kind of the global  
21 landscape that we sit in for the service market.  
22 And, you know, I think historically SEFs have been  
23 the standard for global venue trading of interest  
24 rate derivatives. We operate derivative venues

25 across the globe, multiple MTFs and, actually, you

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1 know, multiple SEFs between TW SEF and DW SEF. And  
2 I think one thing that this debate has kind of  
3 brought to light is that, you know, an increase of  
4 the block sizes that could potentially discourage  
5 people and market participants from trading the way  
6 that they would prefer could shift liquidity away  
7 from the SEF to equivalent venues, and I think  
8 that's something that is an important point that we  
9 just need to keep in mind as the market and the CFTC  
10 looks at this data.

11 So now I'll get into some of the data that we  
12 have. So this chart, similar to some of the other  
13 speakers that -- you know, looking at trading in  
14 reference to overall market volatility is super  
15 important for this debate. This chart, the red line  
16 shows the move index. Obviously, well-known measure  
17 of Treasury volatility. We're using that as a proxy  
18 here for overall interest rate volatility in the  
19 U.S. and this is specifically on dollar interest  
20 rate swaps.

21 That blue line shows the percentage of our  
22 total tickets that are that are above the block  
23 size. And then that lighter blue line shows how  
24 that percentage would change using the new increased

25 block thresholds.

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1 So just a few comments and kind of observations  
2 that we've seen. Obviously, there is a  
3 relationship. Higher rates vol leads to less blocks  
4 being traded, in general.

5 In March of 2020, we obviously saw a  
6 significant decrease in terms of the blocks trading  
7 on the platform. But overall what we've seen in  
8 this greater rates volatility environment has been  
9 an overall kind of shift lower in blocks traded.

10 So just to reference Jan 19 to December 2020,  
11 the average amount of block trades was about 8  
12 percent of the platform and now that's decreased to  
13 4 percent. And what you can also see is that -- you  
14 know, the difference in terms of trades captured  
15 between the original threshold and the proposed  
16 threshold, generally speaking, is one that is  
17 significant. And that echoes kind of Michael's  
18 remarks earlier where, you know, we really have to  
19 look at the cost benefit. Obviously, there's a  
20 benefit in terms of transparency in real time  
21 reporting of capturing more blocks and having those  
22 reported immediately, but that comes with a  
23 potential significant cost to the market  
24 participants and the underlying liquidity that they



25 find in the market. So that's one observation that

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1 we've had.

2 And then in the second chart analyzes what we  
3 see is the difference between, kind of, the RFQ  
4 below 3, in comp execution for blocks. So what  
5 we've seen here is that RFQ3 execution for blocks  
6 has overall increased over the last four years.  
7 Market participants are willing more broadly to  
8 trade block sizes in comp and that's because of the  
9 take-up in certain protocols like requests for  
10 market. But, in general, most market participants  
11 still prefer to execute most of their trades in an  
12 RFQ1 or an RFQ2 fashion, which is studied around 60  
13 percent in the last two years.

14 The change in block sizes along with the  
15 incoming MAT -- made available to trade  
16 establishment obviously changes the flexibility that  
17 that market participants have for those transactions  
18 and how they'd like to engage their liquidity  
19 providers. And I -- you know, we definitely agree  
20 with the marketplace and ISDA that -- you know, that  
21 something that bears a lot of consideration and data  
22 analysis.

23 And to echo Commissioner Mersinger's comments  
24 in the -- to open today. You know, the data in the

1 data, it's just very difficult to analyze. There's  
2 a lot of post-trade events that happen, you know, at  
3 the clearinghouses that we see on our platform, you  
4 know, when clients are trading aggregated positions  
5 for cleanup. It starts distorting the sizes of what  
6 you see in the trading data and detecting what's  
7 truly price forming versus what's not. It's not an  
8 easy task, even when you have all the data in front  
9 of you.

10 So, yeah, I think that's -- that's some of our  
11 observations that we wanted to share today.

12 CHAIR HONG: Thank you, Adam, and, Bhas. It  
13 was helpful to contextualize, you know, how  
14 execution actually happens on the SEFs with the data  
15 and analytics that you provided.

16 Looking forward, I'd love to hear from the  
17 market participants about what you view to be the  
18 practical implications of the new block thresholds,  
19 you know, on a go-forward basis, and welcome any  
20 of -- Tim, Michael, or Tyler to speak.

21 MR. CROWLEY: Yeah, sure.

22 So I'm going to give some simple thoughts on  
23 practical implications of these changes, and then  
24 I'm also going to offer some thoughts on BestEx, in

25 general, in the context of these changes.

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1 So, simply, with certainty, this reduces the  
2 options that end users have to trade swaps. This  
3 requires more and larger size trades to have to go  
4 RFQ to many. Once you're over a block threshold,  
5 the end user can decide if they want to go RFQ to 1,  
6 or RFQ to many. But when you're under it, you have  
7 no choice, you have to go RFQ to many. It's also  
8 being implemented in the time of the shallowest  
9 market depth that we've seen in the last decade. So  
10 when liquidity is more scarce than it was before,  
11 we're reducing the execution options for end users.

12 Also with certainty, this disseminates more  
13 granular information to the rest of the market  
14 faster. So putting those two things together, I  
15 think that these blockchain thresholds decidedly  
16 hinder end user liquidity.

17 And then some thoughts on BestEx. I think  
18 BestEx execution goes beyond just achieving the best  
19 price at any given moment in time. Our clients are  
20 insurance companies, pension funds, and corporate  
21 treasuries, and public mutual funds. And because of  
22 the institutional nature of our client base,  
23 oftentimes the -- our trade size is bigger than a  
24 social sized clip. So multiple iterations are

25 necessary. When I say clip, I mean any singular

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1 transaction that takes place, and social size being  
2 something that generally indicates the average size  
3 of a trade in a market.

4 So when you have a total trade size that's  
5 bigger than a social sized clip, either you need to  
6 transact in a larger than normal transaction, or you  
7 need to break it up into multiple clips. If you  
8 break it up into multiple clips, that can be done  
9 over the course of minutes, or days, or weeks, or  
10 months depending on how big that program is.

11 In my opinion, I think best execution should be  
12 achieving the best average price over an entire  
13 program as opposed to just getting the best price  
14 that you can on any given clip. This usually means  
15 having the smallest footprint possible per clip, and  
16 that usually means having the least amount of  
17 information leakage per trade. Managing information  
18 leakage is a top priority when you're doing any kind  
19 of programmatic trading. So when the RFQ to 1  
20 thresholds go up, that means that when you're  
21 executing a program, you either need to show each  
22 clip to more liquidity providers and risk more  
23 information liquid leakage, or you need to increase  
24 each clip sufficiently to get above the notional

25 threshold, which will then increase the total

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1 transaction costs paid. By definition the larger  
2 the trade, the higher the percentage of that trade  
3 is paid by the client in transaction costs. The  
4 dollar amount paid in transaction costs is not a  
5 one-to-one relationship with the notional size of  
6 the trade.

7 MR. WINNIKE: Thank you.

8 And maybe to build on some of the points that  
9 that Tim just made. We agree that the short answer,  
10 in terms of the implications, is reduced liquidity  
11 for blocked trades, and ultimately higher costs for  
12 outsized risk transfers.

13 And as Tim noted, and I want to emphasize, the  
14 impact of higher costs and lower liquidity isn't a  
15 cost to Blackrock, or Pimco, or to asset managers;  
16 it's a cost to the end user, which is our client who  
17 needs access to these markets to manage risk or get  
18 exposure, and that ultimately erodes the investment  
19 returns of our clients and hinders their ability to  
20 meet their financial goals.

21 So trading in the most cost-effective manner  
22 possible, managing information leakage, and also  
23 creating an ecosystem that delivers the best results  
24 for our clients we think is a key part of our

25 fiduciary responsibility on behalf of our clients.

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1 And when it comes to best execution, as Tim  
2 noted, it doesn't simply mean listing three bids and  
3 three offers -- or three offers and just picking the  
4 best of the three; it's a much more holistic look,  
5 right, at what is in the best interest of our client  
6 overall, and how can we take a trade and achieve  
7 that best result, either by breaking it up or going  
8 RFQ to 1.

9 And we also have to take into account the  
10 market conditions and the different needs of  
11 different clients, right. We have clients that  
12 have -- there are market conditions -- or that  
13 create maybe urgency of execution where our clients  
14 are better off trading a large block and getting  
15 certainty of execution at a specific price, rather  
16 than breaking that trade up to try and mitigate  
17 market impact going RFQ to 3, but then potentially  
18 having the market move, right, before we're able to  
19 execute the full scope of the client's transaction.

20 When we think about the stand holds that we're  
21 raised in terms of the levels of block execution  
22 over time, I think it's important to note that  
23 point -- a relationship between volatility and risk.  
24 And so you have some market participants out there

25 when markets are more volatile, will decrease the

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1 risk budget accordingly and, you know, they  
2 potentially trade in smaller sizes in terms of the  
3 amount of duration risk that they're looking for.  
4 But then you have other clients who need to hedge  
5 their risk in notional terms, right, because they  
6 are a pension plan, they have a certain amount of  
7 duration risk related to their bond holdings. And  
8 those clients don't have really the option, right,  
9 of decreasing how much they hedge. They have to go  
10 to the market and source liquidity for large size  
11 trades. So I think it's those market participants  
12 who may bear more of this increased cost associated  
13 with a decrease in block liquidity.

14 Now, if we go to this -- thank you for the  
15 slides.

16 So one question we would have is, well, how do  
17 we determine, right, what is the optimal level of  
18 dealers to put in competition on a particular trade.  
19 And as noted, that's very much in the expert  
20 judgment of traders -- and that's why clients hire  
21 us to make -- to have that judgment based on market  
22 data pre-trade, post-trade, or our own experience.  
23 But there's -- this isn't just judgment or sticking  
24 your finger in the air.

25 And I think there's a very interesting study

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1 that the CFTC conducted a paper that they published  
2 in 2017, which looks at the mechanisms for selection  
3 and trade formation on swap execution facilities and  
4 CDS markets. And what's useful is -- I think that  
5 this clearly shows the relationship that -- in the  
6 model that the CFTC authors built here that as trade  
7 size increases, generally you get better results by  
8 decreasing the number of dealers that are put into  
9 competition.

10 Now, this study has some limitations that only  
11 looked at trades that were below the block size,  
12 right. So it doesn't tell us more about exactly  
13 what happens to that trade population over the block  
14 size, if it's required to be put in competition.

15 But I think that you would see a continuation of  
16 this trend, right. That as traits increase over the  
17 block size, you probably have benefits that you  
18 could show in the model at a certain notional level  
19 where you would certainly benefit by showing that  
20 trade to one broker rather than the three.

21 And so if we go to the next slide.

22 Yeah, some of the takeaways here from that  
23 paper were that they're re-emphasizing that  
24 trade-off, right, between competition and



25 potentially trying to get the best price for a

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1 client by soliciting multiple bids, but also the  
2 adverse price impact associated with the winners  
3 curse, and information leakage. And it's something  
4 dealer community, and broker, and client community  
5 brings up a lot, but it's very interesting to see it  
6 reflected in the study.

7 And I think it's also a note that, you know, we  
8 see that the winner's curse reflected in the spreads  
9 that customers pay. So the study didn't just say  
10 there's winner's curse that impacts dealers; it  
11 shows that price is passed onto clients.

12 So I can stop it there and then happy to talk  
13 about maybe some of the next steps moving forward  
14 for the market structure committee after that.

15 MS. WELLENSIEK: Great, thank you.

16 I share a lot of the same sentiments expressed  
17 by Tim and Michael. If I take a step back, we have  
18 blocked thresholds in multiple markets including  
19 swaps because regulators understood that these are  
20 transactions that by nature of their size and  
21 liquidity characteristics should not be subject to  
22 the same transparency and execution protocols as  
23 other transaction in the market.

24 I think the practical concern at hand is that

25 the 67 percent notional barrier may not be

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1 appropriate relative to the risk profiles of the  
2 underlying sectors that we're talking about here  
3 when it comes to execution requirements in  
4 particular.

5 I agree that the new thresholds would reduce  
6 flexibility for the buy side around their larger  
7 trades. And also in-turn limit the sell side's  
8 ability to provide the best service to clients  
9 through discussion around execution strategies, and  
10 market dynamics, and type pricing in the sizes  
11 between current and new blocks.

12 I agree that bid offer spreads and larger  
13 trades could widen, which is higher costs for the  
14 buy side and their end customers. And also to  
15 emphasize the point around flexibility. I thought  
16 it was an interesting nuance in the -- both SEF's  
17 data that around periods of heightened volatility  
18 you saw the -- so the use of fewer dealers creep.  
19 So if you look at March 2020, people tended to use  
20 fewer dealers in comp and that showed up in both of  
21 your data. So I think that that emphasizes that  
22 while people are using multiple dealers even on  
23 block trades when markets are difficult; that need  
24 to be flexible is really important.

25 I'd also point out that other global regulatory

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1 regimes, as I said earlier, such as MiFID don't  
2 require astringent RFQ to 3 and rather empower  
3 clients to implement a BestEx framework that is  
4 appropriate, and that is subject matter expertise  
5 that clients employ. I think there is a valid  
6 concern that the new block sizes could encourage  
7 activity away from USFs if they're viewed as too  
8 prescriptive.

9 Happy to maybe jump into some recommendations  
10 and, Tim, and, Michael, please add on, if you'd  
11 like.

12 I think you know, as argued by others,  
13 additional study of appropriate block size  
14 calibration would be very warranted particularly  
15 around the execution requirement. An analysis that  
16 considers how we set the thresholds based on the  
17 objectives that Steve laid out at the beginning,  
18 particularly given the evolution in transparency  
19 that we have both from SDR and pre-trade.  
20 Free-trade streams now, I think, would be very  
21 relevant.

22 Additionally given, we have upcoming reviews  
23 around transparency regimes coming in the UK and the  
24 EU. It might be worthwhile for the CFTC to pause

25 and ensure that any implementation is done in a

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1 coordinated fashion with other regulatory regimes.

2 And then the last point I would make is that

3 the execution requirement is based on a block

4 size -- a block size threshold that is across the

5 full derivatives market. It might be worthwhile to

6 consider just the clear derivatives market and see

7 how -- how to appropriately calibrate blocks against

8 that population of trades as opposed to the full

9 market.

10 MR. WINNIKE: Thank you.

11 And we would also build on that call for

12 further study. I think that the CFTC study, which

13 was based on non-public SDR data, shows the type of

14 very nuanced and careful analysis that it's possible

15 for regulators to undertake using data sets that the

16 buy side won't have access to. Notwithstanding our

17 great relationship with our friends at the SEFs here

18 today.

19 And I think it's really important to remember

20 that the infrastructure that the -- that has been

21 built -- the block, non-block regime is right, it's

22 really just a question of calibration. And so what

23 are all the sources of data that we can put together

24 to help inform that calibration to make sure it

25 reflects the current ecosystem and market

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1 environments.

2 And then, finally, when we think about the  
3 RFQ-3 requirement, which is a different type of  
4 transparency provided to the market. It lets market  
5 participants -- some market participants know about  
6 a trade, pre-trade, right, before it happens, versus  
7 post-trade reporting should RFQ to 3 have the same  
8 block sizes as the reporting -- the post-trade  
9 reporting regime. Because there could be  
10 differences in impact of post-trade reporting versus  
11 that pre-trade information leakage, as it pertains  
12 to potential front-running of orders, or hedging  
13 activity of -- front running of hedging activity by  
14 dealer participants.

15 CHAIRMAN HONG: Great, thank you very much.

16 Steven, did you have any further remarks given  
17 that ISDA represents a broad swath of industry  
18 participants?

19 MR. KENNEDY: Sure.

20 We have a looming deadline in five months --  
21 four and a half months, December 4th, 2023 for the  
22 implementation of the new block thresholds.

23 I think what we've heard today is some pretty  
24 convincing arguments about some of the issues that

25 market participants face with regards to those --

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1 that implementation timeline in terms of market  
2 liquidity and depth, in terms of taking undue risk,  
3 in terms of execution methodology.

4 We also have two CFTC committees that are  
5 looking at these issues, and we think -- our members  
6 think many of the firms sitting around this table  
7 think that we should let those committees do their  
8 jobs and do the analysis that's required to inform a  
9 reason discussion.

10 In addition to that, we also have these  
11 annoying operational issues that no one likes to pay  
12 much attention to. But we just went through a  
13 transition to -- trade sizes have changed, trade  
14 types have changed. We had an implementation in  
15 December of a major reporting rewrite. There's  
16 another implementation deadline in January for UPI.  
17 So we've written, as you know, and have asked CFTC  
18 for no-action relief. Time limited no-action relief  
19 for December of 2024 to let these issues get  
20 examined appropriately and then decided upon.

21 CHAIR HONG: Great, thank you, Steve. And  
22 thanks very much to all of the panelists.

23 I think you know your observations taken in  
24 combination with Commissioner Mersinger's opening

25 remarks, you know, certainly give me a lot of food

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1 for thought as we contemplate what's ahead of us  
2 both from a transparency, as well as execution  
3 standpoint.

4 At this point I would welcome broader committee  
5 members to make comment and/or ask questions of the  
6 panelists. Isaac.

7 MR. CHANG: Thank you.

8 And I'd like to thank the panelists for their  
9 thoughtful insights, and I certainly -- I think one  
10 point that's been brought out very consistently is  
11 understanding the fundamental relationship between  
12 volatility and transaction costs. Economically, it  
13 makes a lot of sense. As volatility goes up,  
14 transaction costs also go up. And I think part of  
15 the argument -- I don't know if anyone said this  
16 explicitly, but I think is implicit is that if you  
17 actually look at the recent volatility regime, we've  
18 seen an unprecedented speed in Fed hiking, frankly,  
19 for example, and -- and, you know, probably you'd  
20 look at rates volatility being fairly elevated since  
21 the Russian, Ukraine invasion.

22 Are you sort of -- I think the fundamental  
23 argument is that the Vol regime is -- we're  
24 currently in is too high relative to the Vol regime

25 potentially over which the block threshold was

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1 calibrated, and I think that's a -- that's a fair  
2 point.

3 I'm just going to raise the point, though, that  
4 when Vol was much, much lower. None of the industry  
5 incumbents were pointing out that maybe block  
6 thresholds, given that current political regime were  
7 too high and should be lowered. I mean too low and  
8 should be raised, right. I mean, we're saying now  
9 the data set doesn't match. But when Vol was really  
10 low, everyone was very happy to continue trading.  
11 And that kind of raises a point, which I think -- I  
12 think needs to be addressed in -- to counterbalance  
13 I think a lot of the very legitimate concerns that  
14 the panels are brought out, which is that less  
15 information favors incumbents in marketplaces and  
16 discourages competition.

17 Now, if you're Pimco, without data around,  
18 what -- around -- without data around, what other  
19 large block transactions are happening. How do you  
20 know that BlackRock isn't executing better. And if  
21 you're BlackRock, how do you know Pimco isn't  
22 executing better. And if you're a client of these  
23 firms, how do you know that the provider who's  
24 executing trades for you is doing the best job for



25 you without the underlying data. And that's kind of

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1 one of the points I want to talk about.

2 Look, I think it's kind of ironic we're here at  
3 the New York Stock Exchange. You know, if you  
4 actually look at the history of the U.S Equity  
5 market, and you look at transaction costs pre reg  
6 NMS for investors, and post-reg NMS, which  
7 fundamentally change the transparency and  
8 obligations, it's night and day. I know we're  
9 talking a lot of hypotheticals about what could or  
10 couldn't happen. I think the fundamental data in  
11 most markets shows us more transparency means lower  
12 execution costs.

13 And the last thing I point out is that while I  
14 agree we need to be thoughtful and that on a  
15 particular transaction for a particular end user,  
16 for sure it is true that having less flexibility  
17 potentially hurts in that one transaction.

18 I do just want to point out that if you look at  
19 the marketplace as a whole and the utility of that  
20 marketplace as a whole, there's probably another end  
21 user, another market participant, at that very time  
22 who's looking to trade in the other direction. And  
23 at that point, not having the information that that  
24 trade is about happened, right, and potentially is

25 causing a temporary impact in the market,

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1 disadvantages is that market participant from being  
2 able to act -- execute as efficiently as possible,  
3 right.

4 And so I guess my point is, like, we have to  
5 take a little bit of a bigger picture here. I agree  
6 there's definitely concerns we need to work through.  
7 But, again, when you look at the marketplace as a  
8 whole, I just sort of caution sort of the committee  
9 that every market we've seen over time, transparency  
10 only helps improve -- there has to be a transition,  
11 it has to be thoughtful. But over time, more  
12 transparency only helps the end market participant  
13 reduce costs.

14 CHAIR HONG: Thank you, Isaac.

15 Michael.

16 MR. WINNIKE: Thank you.

17 Yeah, I think I'd just like to continue that  
18 conversation a little bit and contextualize it.

19 And, Isaac, I think those are some important points,  
20 because we really do need to make sure balancing the  
21 interests of transparency against, you know, the  
22 impact of liquidity to clients.

23 I do want to just note that the -- when it  
24 comes to the points around how do clients know that

25 they're getting a good result from their asset

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1 manager. The block size regime does not impact  
2 whether or not there is post-trade reporting. So if  
3 you want to do post-trade analysis about execution  
4 quality of your manager, the SDR data is there for  
5 blocks and non-blocks alike. There are aspects of  
6 the cap size in terms of when uncapped data is  
7 released. But it's very important to BlackRock that  
8 we have access to that data, right, to also be able  
9 to conduct post-trade t-cost analysis and inform our  
10 own trading strategies. Maybe infer if Pimco is  
11 doing a better job and we can learn from them. But  
12 I think that we have access to that data.

13 When we think about the RFQ-3 requirement or  
14 potentially real-time reporting, I also agree that  
15 it's something where policymakers are going to have  
16 to weigh some trade-offs, right, and not, you know,  
17 large clients that have large positions to hedge,  
18 you know, they are protected by blocks trades.  
19 There are market participants who are able to trade  
20 on a higher frequency basis, harvest information,  
21 capitalize and trade quickly. Those might benefit  
22 more, right, from instantaneous liquidity, and both  
23 sets of market participants are very important,  
24 right. And so it's really just, what is the cost

25 benefit of that incremental change to a very small

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1 number of trades that I think we have to look at.

2 CHAIR HONG: Thank you, Michael.

3 I think we have time for one more comment or  
4 question.

5 Okay. Well, thank you to the panelists and the  
6 committee for your engagement here on a topic that,  
7 you know, certainly has been top of mind and front  
8 and center across the derivatives community. I  
9 think it was really helpful to have, you know,  
10 various perspectives represented and, you know, I  
11 look forward to continuing to engage with the  
12 subcommittee on this very important issue.

13 Alrighty. Now we will hear from the chair and  
14 the co-chair of the GMAC technical issues  
15 subcommittee. Allison Lurton, General Counsel and  
16 Chief Legal Officer at ISDA -- or I apologize, at  
17 FIA. And Tara Kruse, Global Head of Infrastructure  
18 Data and Non-Cleared Margin at ISDA about the  
19 planned work of this subcommittee.

20 Allison and Tara.

21 MS. KRUSE: Thank you, Amy. Congratulations on  
22 your appointment as chair of the GMAC. Thank you to  
23 Commissioner Pham for inviting me to co-chair the  
24 technical issue subcommittee together with Allison.

25 We're both on a holiday this week but appreciate the

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1 opportunity to address the GMAC remotely.

2 We're looking forward to engaging with the  
3 members of the subcommittee. They represent a  
4 wealth and variety of knowledge and experience. We  
5 want to be able to deliver meaningful  
6 recommendations for consideration by the GMAC.

7 So many global market challenges are dependent  
8 on or can be improved through technology-based  
9 standards and solutions, so thank you to  
10 Commissioner Pham and the GMAC for recognizing this  
11 by establishing the technical issues subcommittee  
12 and. And thank you to Commissioners Mersinger,  
13 Johnson, and Goldsmith Romero for your support.

14 We held an initial meeting of the subcommittee  
15 on July 7th to gather suggestions in respect of the  
16 four focus areas identified by Commissioner Pham.  
17 In the coming months, we'll flush these out with the  
18 subcommittee and develop a work plan. But for  
19 today, we'll share with you the first initial ideas  
20 of the subcommittee. I'll cover the first two focus  
21 areas, and then pass on to Allison to cover the last  
22 two.

23 So if we want to pull up the slides and go to  
24 the first one.

1 able to provide recommendations in respect of  
2 amalgamation of trade reporting data for market  
3 oversight. This could include global guidance and  
4 alignment around product identification using the  
5 UPI, UTI uniqueness checks, and the role of trade  
6 repositories if at all on UPI processing. Providing  
7 validation standards for critical data elements  
8 perhaps beyond the field and value guidance that we  
9 currently have in the rewrite. Addressing ISO  
10 implementation variances that we're seeing between  
11 reporting regimes. Identifying standards and  
12 technology solutions that could improve trade data  
13 consistency and quality. Analyzing the legal and  
14 regulatory hurdles that prevent policymakers from  
15 seeing market activity on a holistic basis, and  
16 looking at potential solutions to such hurdles.  
17 Assessing whether jurisdictional rewrite  
18 implementation differences could undermine the  
19 ability to amalgamate data in the future and  
20 recommend harmonization methods.

21 If you go to the next slide, we'll look at the  
22 next focus area. Which, to improve efficiencies in  
23 post-trade processes. The subcommittee would like  
24 to look at providing some recommendations to improve

25 these efficiencies. This could include improving

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1 collateral management to reduce cost and risk, and  
2 improve liquidity management, for instance, through  
3 data standards for collateral representation; the  
4 development and use of standard operating  
5 procedures; elimination of manual processes like the  
6 use of faxes for collateral release. Also areas for  
7 increased automation, for instance, electronic and  
8 digital transaction confirmation in asset classes  
9 where this is not common.

10 Finally, supporting DMIST initiatives regarding  
11 allocations and give ups to reduce trade processing  
12 times.

13 I will pass over to Allison.

14 MS. LURTON: Thank you, Tara, and thanks for  
15 including me remotely and including me on this  
16 important work.

17 The next two topic areas we've discussed, and  
18 plan to create work plans for, with the help of the  
19 members of the technical issues subcommittee,  
20 include the global coordination of market events.

21 This is an area that many trade associations have  
22 been working on for some time, including FIA. And  
23 so the opportunity to discuss it and to possibly  
24 come up with recommended solutions is welcomed.

1    to the market of coordinating scheduled market,  
2    versus bank, or liquidity market closures could be  
3    very helpful.

4        Secondly, we intend to consider and address  
5    recommendations regarding, in particular, unexpected  
6    market disruptions. We've had an occasion over the  
7    last few years to work through some of these, one  
8    with the passing of the Queen of England, and one  
9    with -- in recent years with a U.S. Presidential  
10   death. But those types of things can create  
11   additional issues because they are not planned. And  
12   so we consider, and we'll come up with a plan  
13   related to regular -- regulator communication, which  
14   has been helpful in the past, and we think we can  
15   improve with standardization industry coordination  
16   so that there's information sharing across playbooks  
17   and points of connectivity. While many trades are  
18   working on this, we want to make sure they're  
19   coordinated.

20        And then also it was suggested we consider the  
21   technical aspects of counterparty default scenario  
22   planning. We also want to standardize generally  
23   communication around the averages. So even those  
24   that are planned, we think could be benefitted by



25 some standardization.

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1 We are aware that there are some CCP-led global  
2 fire drill efforts related to default simulation,  
3 and we'd like to stay connected with those efforts,  
4 possibly including -- encouraging CFTC roles and  
5 encouraging drills in emerging market regulators.  
6 So we'll be monitoring that enhancer or add where we  
7 can and where it's helpful.

8 Finally, we've also suggested the consideration  
9 of the development of a playbook for the debt  
10 ceiling specifically, and also raising preparedness  
11 on the impact of a transition to the T1 settlement.  
12 We've got some specific issues as well that we've  
13 identified.

14 So the next and final slide, please.

15 So the final issue we've discussed with the  
16 subcommittee was a little more open, and we invited,  
17 really, suggestions for cross-border infrastructure  
18 issues that we could discuss. Those that we  
19 identified are many of them part of other efforts,  
20 but we thought our subcommittee could look at those  
21 that are specific to technical issues or  
22 infrastructure issues where we could help. And so  
23 those that have been identified for now include  
24 examining further cloud standardization across the

25 industry, the benefits of cloud standardization and

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1 the other infrastructure improvements. Also  
2 identified was the use of many money transfer and  
3 ACH in broker payments and any issues that creates.  
4 There was a suggestion relating to access issues for  
5 clearing and trading, which are important I think to  
6 all of us on these -- on the GMAC. And for us to  
7 monitor those to see if there are technical issues  
8 we could address.

9 And, then, finally, we're aware of CPMI IOSCO  
10 efforts on VM margining practices. And it was  
11 suggested that if technical or infrastructure issues  
12 were identified in that work, the committee could  
13 also be helpful there.

14 So that's a summary. This last slide I think  
15 is slightly more open. We did indicate to the  
16 committee we would be open for adding new topics as  
17 they come up. But for now, Tara and I have  
18 committed to work with the subcommittee to develop a  
19 work plan for these issues.

20 And with that, I'll turn it back over to the  
21 meeting. Thank you.

22 CHAIR HONG: Great. Thank you, Tara, and,  
23 Allison.

24 This sounds like a very robust work plan on

25 some very important issues that will impact markets

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1 globally. We look forward to any recommendations  
2 that your subcommittee has for the GMAC.

3 FEDERAL OFFICER RAIMONDI: Okay, thanks, Amy.

4 So, everyone, it's about 12:07 p.m., and at  
5 this time, the GMAC will take an hour break for  
6 lunch. We will see you back here in one hour as  
7 noted. And in case you leave the building, just  
8 make sure you hold onto these blue tags because  
9 that's how you will be able to get back in. Thanks.

10 (A lunch recess is taken.)

11 FEDERAL OFFICER RAIMONDI: All right, everyone,  
12 it's 1:08 p.m., and we are now back on the record.

13 CHAIR HONG: Great. We will now hear an update  
14 from the chair and co-chair of the GMAC digital  
15 asset market subcommittee Caroline Butler, who is  
16 Global Head of Digital Assets at BNY Mellon, and  
17 Sandy Kaul, Senior Vice President and Head of  
18 Digital and Investor Advisory Services at Franklin  
19 Templeton.

20 Caroline and Sandy, the floor is yours.

21 MS. KAUL: Great. Thank you, guys, so much.  
22 Thank you to the GMAC committee and to  
23 Commissioner Pham and the other CFTC Commissioners  
24 for this opportunity to start this new and very

25 important work stream. We're very excited to give

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1 you a little bit of our thinking here as we launch

2 this new effort.

3 So if we could go to the first slide.

4 For people who have not been very familiar --

5 okay, we got it.

6 For people who have not been familiar with

7 potentially how quickly the digital asset ecosystem

8 has been advancing, we'd like to just take one

9 minute here to really kind of give you an update on

10 where we are, and what we are really beginning to be

11 faced with and needing to think about how to address

12 as an industry.

13 So from the emergence of Bitcoin and the

14 introduction of Blockchain, which was really just in

15 the beginning of 2009, that was a payment network

16 that was introduced. By 2015, that payment network

17 had been expanded into what we call now a layer-one

18 Blockchain where there is a payment network embedded

19 with a software and app development and a hosting

20 platform, and with a virtual computer that monitors

21 and self-executes contract terms.

22 This was the model that Ethereum came out with

23 in 2015. We've seen that model proliferate at this

24 point. There are a large number of layer-one

25 blockchains, and there has been a tremendous number

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1 of either decentralized applications or new pieces  
2 of digital asset infrastructure that have been  
3 introduced subsequent to those Blockchain  
4 emergences, including layer-two Blockchains, Oracle  
5 networks, staking pools, decentralized exchanges,  
6 DeFi applications, non-fungible tokens. All part of  
7 an ecosystem that is becoming increasingly complex  
8 and that operates 24/7, 365.

9 So, you know, this, in many ways, is where  
10 innovation is occurring. You can see at the bottom  
11 there that there were over 20,000 active developers  
12 as of June this year working in this whole open  
13 source Web3 ecosystem. And in addition to being  
14 24/7, 365, some of the attributes of these  
15 marketplaces are very important. Globally  
16 accessible on public networks they have programmable  
17 rules and currencies and tokens that can be put into  
18 assets so that the contract and the asset actually  
19 move together. The contract that monitors and it  
20 controls the asset and that there are new pieces of  
21 industry infrastructure that are being created such  
22 as digital wallets.

23 This is really something that, you know,  
24 whether you are engaged in this space or not, it's

25 important to be monitoring the progress because it's

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1 really spilling over. And when we think about how  
2 it's spilling over, we're really seeing the  
3 crossover of these digital asset and market  
4 Innovations, really in three ways in our current  
5 ecosystem. We're seeing the tokenization of  
6 physical and digital assets, so as assets you'd  
7 expect like gold and real estate, things that we  
8 have traditionally traded. But new types of assets  
9 as well are being made tradable, as well as  
10 investable, right. So you're starting to see art.  
11 This was a really interesting example about some  
12 Andy Warhol prints being tokenized and  
13 fractionalized and being able to use those  
14 fractional shares of art as collateral in  
15 decentralized finance transactions. You're starting  
16 to see all sorts of different royalty pools  
17 beginning to be made into consumer facing investment  
18 options. In our own industry, you're seeing a  
19 tremendous amount of effort in the tokenization of  
20 financial instruments. You're seeing '40 ACT funds  
21 being tokenized. You're seeing individual  
22 securities being tokenized. You're seeing private  
23 funds being tokenized. Even structured loans and  
24 structured products and derivatives being tokenized.

1 experimentation moving out of the crypto and the  
2 digital space into the broader set of financial  
3 markets. And we're really starting to explore a  
4 whole set of regulated digital asset use cases,  
5 right. We're looking at collateral management and  
6 financing, liquidity pools, trade receivables and  
7 structured notes, cash payments, and settlement.  
8 And these experimentations are being sponsored not  
9 just by organizations and firms in the U.S., but all  
10 over the world. And many of the participants here  
11 today are engaged in these different initiatives and  
12 pilots.

13 And so we really are starting to have to take a  
14 deeper consideration, we feel, about what are the  
15 opportunities as well as the challenges and threats  
16 in being able to bring all of this innovation and  
17 potential enhancements and efficiencies into our  
18 existing financial regulatory framework.

19 MS. BUTLER: So as Sandy mentioned, we are very  
20 excited to create the digital asset committee,  
21 particularly to harness the power that the  
22 underlying technologies that underpin digital assets  
23 can bring to bear.

24 Lynn Martin mentioned it in her opening remarks

25 earlier that technology really is the aid in

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1 continuing to enhance resiliency, safety, and  
2 soundness, and we very much shared that same  
3 sentiment. We're very fortunate to have a very  
4 broad and diverse group of members representing the  
5 committee.

6 A special thanks to Commissioner Pham for a  
7 very energized group. We're already seeing a lot of  
8 enthusiastic members starting to reach out as we  
9 create the first set of meetings in our work  
10 streams.

11 We really are excited about leveraging the  
12 power of the diversity of experience and  
13 perspectives to really tackle some of the industry  
14 challenges in adopting the new technology.

15 And I do think it's fair to say, and I'm sure  
16 you would echo the same sentiment, that we have  
17 really an adoption issue today, and there are a  
18 number of challenges that you can see set out here  
19 that really are underpinning those challenges.

20 We do see those unique challenges associated to  
21 digital assets as a catalyst to help us really  
22 reimagine the guidelines for the 21st Century  
23 financial ecosystem. So as an example, if you think  
24 about how regulations are set out today, they really



25 are around the definition of an asset.

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1 With the new technology that brings digital  
2 assets to bear, it's the use of the asset that  
3 becomes really interesting, and really seeing how we  
4 can build cohesion around regulations pertaining to  
5 the use of the asset, versus the definition of the  
6 asset itself will become really interesting.

7 Sandy mentioned 24 by 7. That's another really  
8 important -- it's the underpinning of a digital  
9 asset marketplace, but it's actually giving us  
10 really good and interesting opportunities for  
11 transparency. We mentioned a number of times today  
12 in a number of speeches, transparency being the key  
13 goal that we all share. Digital assets actually  
14 enhances transparency and gives you the opportunity  
15 to really monitor and manage in real time versus  
16 after the fact.

17 So I think there's a lot of areas where the  
18 challenges have unique opportunities and bringing  
19 together this group will help us actually harness  
20 those opportunities in a prudent way.

21 So I do think we need to have a real sense of  
22 urgency around coming together as a global industry  
23 to solve for these challenges and to do so in a  
24 globally cohesive way across the full industry.

25 Our work streams are going to be focused on

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1 addressing these challenges and building  
2 recommendations to seek the opportunities. We  
3 believe digital assets can materialize. As you can  
4 see here, we've got five work streams in total.  
5 We're just starting to kick these off. You'll see  
6 the word tokenization repeated multiple times. Four  
7 of the work streams are focused on tokenized assets,  
8 so this is a broad array of digital assets not just  
9 crypto assets, and those will vary from the  
10 infrastructure so layer 1, layer 2 protocols and the  
11 definitions around those. Looking at nomenclature  
12 and taxonomy I think it's -- it's very important to  
13 have a common taxonomy as we look to reimagine  
14 financial ecosystems. Obviously a focus on  
15 pre-trade and post-trades and clearly governance  
16 risk and control frameworks. So we'll be looking to  
17 come back in October with a set of recommendations  
18 across all of these four.

19 We're also looking at NFT and utility tokens as  
20 a separate work stream, and we really do see the  
21 power of NFT tokens as something that can actually  
22 transform the financial ecosystem as well.

23 So as we kick off these work streams in the  
24 next coming weeks, we look forward to getting a lot

25 of energized debates and bringing that back here in

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1 October. Thank you.

2 CHAIR HONG: Thank you, Carolyn and Sandy,  
3 that's terrific.

4 Now this brings us into our last panel of the  
5 day, which is called tokenization of real assets and  
6 institutional adoption. It's going to be split into  
7 two segments. The first will be a presentation on  
8 tokenization in financial services and beyond. And  
9 then the second segment will be a highlight of key  
10 tokenization initiatives globally across the U.S, as  
11 well as Europe.

12 So with that, I will hand it over to Julian  
13 Sevillano who is partner, and Matthew de Vern who is  
14 associate partner from McKinsey and Company.

15 MR. SEVILLANO: Thank you very much. And thank  
16 you for the opportunity to speak to the committee,  
17 Commissioner Pham and the CFDC. We're excited about  
18 this effort and really excited to talk more about  
19 it. And thank you co-chairs for actually teeing  
20 this up perfectly, because we're going to talk a lot  
21 about tokenization. We're going to talk about some  
22 of the fundamentals of tokenization. We're going to  
23 talk about some of the benefits, and also some of  
24 the challenges. And we'll talk about where we think

25 the industry is today and where it could go and what

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1 sort of collaboration can the industry do.

2 I think most importantly we also want to talk  
3 about how the underlying technology is really a tech  
4 stack. And there's a lot that you can do with that  
5 tech stack and maybe disaggregating that a little  
6 bit from what has happened over the last, you know,  
7 18, 24 months, you know, from a broader market  
8 context perspective.

9 So key messages for today. We'll talk about  
10 how, you know, digital assets and what we're doing  
11 here and building, you know, tokenization and  
12 building this tech stack has actually been quite  
13 resilient over -- over this period of extreme  
14 volatility. We won't go into some of the high  
15 profile bankruptcies, or fraud cases, or regulatory  
16 enforcement actions, or other things that have  
17 happened over the last 12, 24 months. We all know  
18 them.

19 What's important to see that building is still  
20 continuing and investments are still continuing to  
21 come, and we'll talk a little bit about that.

22 There's also been a lot of public -- you know,  
23 several very prominent executives very publicly  
24 voicing that, you know, this is blockchain, not

25 crypto narrative, and that there is real utility to

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1 this and enterprises have continued to develop.

2 At the same time, we recognize that

3 tokenization creates blockchain-based

4 representations of real world assets with real

5 benefits, right. There are benefits such as

6 improved capital efficiency operational cost savings

7 and enhanced compliance and transparency. But some

8 of these technologies are not quite ready for prime

9 time, if we want to put it that way. And there's a

10 lot of maturity that needs to happen and a lot of

11 maturing that needs to happen from that perspective.

12 We do see that there can be adoption across

13 certain technologies -- across certain asset classes

14 and that we might actually be in a bit of an

15 inflection point. And we'll talk about what the

16 drivers are of that inflection point as well. And

17 then I think at the -- lastly we'll talk about what

18 can -- what can collectively the industry do

19 together to basically move things forward and to

20 work collectively in this way.

21 So maybe we can move to this. So this is a

22 good slide. So this slide talks a little bit

23 about -- so what do we mean by there's been

24 resiliency. So these are some real numbers, right.

25 They're still, you know, well over 800 digital asset

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1 funds that are actively investing in blockchain  
2 technology. There's about \$3B that was processed in  
3 decentralized exchanges in 2022; that's down 20  
4 percent. But what's interesting is that centralized  
5 exchanges were down almost 50 percent. And that  
6 number of 3 billion compares to about 8 billion in  
7 centralized exchanges at the end of 2022. So the  
8 gap is narrowing, and we'll see, right. So it's  
9 interesting -- it's interesting stats. You know,  
10 this is another 64 percent of Fortune 500 executives  
11 indicate investing in blockchain is important to  
12 stay ahead of competition. Thirty percent of  
13 financial market infrastructure firms have active  
14 pilots and digital assets investments. Many of you  
15 are here, right, and seeing that there's actually  
16 building going on. Ninety-five percent of  
17 governments around the world who are actively  
18 engaged with digital assets.

19 You know, obviously there's a lot of public  
20 CBDC trials out there. There's also a lot of  
21 regulation that's happening. There's a lot of --  
22 you know, in Mica in Europe, the initiatives across  
23 the UAE and Hong Kong, Singapore and lots of other  
24 areas. There's a lot of real thinking happening.

25 How can we foster this technology in a safe and

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1 sound way. How can how can we think about how to do  
2 that. We'll talk a little bit about that as well.

3 Private -- you know, private equity venture  
4 capital investment has -- you know, there was still  
5 \$30B last year; it has declined quite significantly  
6 at the beginning of this year. Maybe it's just a  
7 pause, you know, we'll see, right. So that speaks a  
8 little bit to the resiliency in the period.

9 And maybe we can get to the next slide.

10 This is how -- yeah, this is really an  
11 illustration of the tech stack itself, right. And  
12 we won't go into the details. But, you know, when  
13 you really -- you think about it, the underlying  
14 blockchain -- and there are many layer ones -- have  
15 different types of functionality. And those  
16 functionalities have to balance out, you know, the  
17 tenets of security, reliability, and throughput, or  
18 speed, right. And so they have different con --  
19 they have different utilities, right. And if you  
20 think about that technology, at some point there  
21 will be a Holy Grail where all three -- all three of  
22 those things can -- can act -- it can interact. But  
23 in the meantime, you have to think about what the  
24 use cases are relative to the different types of

25 underlying technology that you're going to use.

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1 If you layer on that, we look at smart  
2 contracts that have ever increasing functionality.  
3 But emerging standards are still -- still happening.  
4 I like to think about smart contracts as it's just  
5 software, right. And so we already have strong  
6 governance for software life cycle development. How  
7 do we build software -- how do we build governance  
8 for smart contract development in the same way as we  
9 do for software development. And I think that will  
10 allow us to be able to build indus- --  
11 industry-grade kind of solutions. And layer on top  
12 of that assets and tokens, and then you have  
13 applications.

14 At the end of the day applications can be  
15 financial and they can be non-financial, right.  
16 And, you know, I think what we do see is obviously  
17 the financial applications leading, but we also see  
18 a lot of non-financial applications coming to the  
19 fore, and we'll talk a little bit about them. But  
20 what's interesting about that is they're both driven  
21 not just by need, but they're also driven by the  
22 emerging functionality. Every time you create --  
23 you know, comment that you made about NFTs  
24 absolutely, right. NFTS is another area that is



25 just so far has been focused in the -- in the, you

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1 know, art, gaming and -- and other -- you know, and  
2 entertainment industry. But the underlying  
3 technology that an NFT is built upon can be  
4 leveraged for so many other applications. But we go  
5 back to the trade-off of how much does it cost, how  
6 fast is it, how -- how -- how reliable is it, et  
7 cetera, and that's where you really need to think  
8 about it.

9 So if we think about the next slide -- this, we  
10 like to think about, as a convergence of Web2 and  
11 Web3. You know, Web3 being anything that's  
12 blockchain DLT-based. Web2 kind of being, you know,  
13 traditionally internet, right. And we think that  
14 there's a significant amount of overlap between  
15 those two worlds and that things that -- you know,  
16 that you can create a lot of utility by really  
17 understanding where the sweet spot is be based on  
18 what you're building. And what you see here is  
19 really a lot of different applications, tokenization  
20 being one of them, fractionalization being a type of  
21 tokenization, you know, NFTs, D5s, et cetera. And  
22 if you think about those applications, you know,  
23 there are industries that naturally lend themselves  
24 to these applications more than others such as:

1 manufacturing, transportation, health care, right.  
2 There are -- there -- for several years now, people  
3 have been developing -- or firms have been  
4 developing different pilots, right. You can't say  
5 that anything right now is really at a level of  
6 scale, but what we can say is that these things  
7 continue to prove themselves out. You know, for  
8 example, if we think about Supply Chain Management.  
9 There have been several pilots that have worked  
10 through and then maybe have been sunsetted, but  
11 there are others that are coming forward, right. So  
12 the idea is, Why were those early applications not  
13 ready for prime time. Was it the technology. Was  
14 it the use case. Was it that there wasn't enough  
15 value.

16 I think the fact that there are continuing  
17 exam -- you know -- you know, experimentations in  
18 these areas demonstrates that there is -- that there  
19 is real value to be had; it's just a matter of, Are  
20 we ready -- you know, is this -- is this mature  
21 enough or not.

22 So maybe if we jump to the next slide, I'll  
23 hand it over to you, Matthew.

24 MR. De VERN: So moving forward. If we deep

1 what -- what tokenization is.

2 So tokenization is the process of creating a  
3 digital representation of an asset on the  
4 blockchain. Now, if we -- at a high level, we can  
5 think of it of four different steps. The first step  
6 is we call the sourcing of the asset. Now, as Sandy  
7 touched upon earlier, there's a wide variety of  
8 assets that you could look to tokenize; it could be  
9 a commodity like gold, it could be a financial  
10 instrument equity bond, or a fund, or it can even be  
11 a pretty digital native asset like digital art.  
12 Once you've identified that asset, the token  
13 issuance in custody can begin. If there's any title  
14 to an underlying physical asset, say if we're  
15 looking at a commodity, an actual piece of gold,  
16 that underlying physical asset needs to be  
17 immobilized in a controlled location. Typically,  
18 this can be done by a qualified custodian or an  
19 established trust company, and then that token can  
20 be created. There's three key pieces to creating  
21 the token.

22 First is defining the token standard, which  
23 effectively is thinking the guideline of how we  
24 build a token. A common standard is ERC-20 on

25 the -- on the ECR network.

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1 Then deciding the network on which the token  
2 will sit. Networks can be public or private. A  
3 public network is network to which anyone can  
4 participate. The private network is by defining  
5 select participants or members that can join in,  
6 eventually, then trade that to asset.

7 And the third and most important piece is  
8 embedding functions into the token, or what you may  
9 have heard as effectively building the smart  
10 contract. And that's -- think of it as coding rules  
11 in the token that will define how that asset is  
12 monitored and effectively operates over time. It  
13 could be compliance rules on restrictions of use of  
14 that token, or it could be on the actual functioning  
15 of that specific asset if we're talking about a  
16 fixed income, it could be rules on the interest  
17 calculation and the interest payment.

18 Once those have been decided by the asset  
19 owner, typically a tokenization provider will create  
20 that token and place it on the -- on the blockchain.  
21 And then custody of that token, at a digital  
22 custodian pending distribution.

23 The next step then is the distribution -- and  
24 we can stay to the -- the next step is the

25 distribution to the ultimate investor. So the

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1 investor would create an account. What we call a  
2 wallet, you may have heard, on the -- on the  
3 blockchain. The -- this exchange, or the  
4 acquisition of the token may require broker/dealer  
5 or transfer agent. And if that asset is to have a  
6 secondary market, or create secondary liquidity for  
7 it, you may have a venue that then allows to trade  
8 that asset.

9 And then, finally, is the asset servicing  
10 similarly to -- with traditional assets you'll have  
11 servicing tied to the asset; it could be auditing;  
12 it could be map calculations regulatory reporting,  
13 et cetera.

14 Now, the important nuance with this process  
15 that we've seen today in the industry develop is  
16 there's two ways effectively to go about it. One is  
17 what we call digital native. Everything I just  
18 described would happen on chain. So a bond would be  
19 issued directly on chain, the capital would be  
20 raised on chain. The other model is what we call  
21 digital twin where there's an underlying parallel on  
22 the traditional infrastructure and the -- if I use  
23 the bond example again, there's an existing bond in  
24 traditional infrastructure, and you create a replica

25 effectively on the blockchain that can trade and

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1 operate on the blockchain.

2 Now, the benefit of the latter is it's more  
3 compatible with our existing infrastructure and an  
4 existing asset could be, therefore, created as a  
5 replica on blockchain. The drawback, though, is --  
6 and we'll touch on in a few seconds -- you don't get  
7 many of the benefits -- or at least the full  
8 benefits that tokenization in blockchain can  
9 provide.

10 So if we think now of the benefits of  
11 tokenization. So it really stems from some of the  
12 benefits of the blockchain technology itself, and  
13 three in particular.

14 We touched on 24/7 operations.

15 The second one is what we call atomic  
16 settlement, or near instance settlement. So  
17 settlements -- transactions can settle within  
18 seconds or minutes.

19 And the third is the programmability of the  
20 asset. So the fact that you can embed -- embed  
21 those functions in the -- in the smart contract.

22 The first two, the 24/7 operations and the  
23 atomic settlement, are particularly relevant as you  
24 think of capital efficiency. With traditional

25 infrastructure, transactions can settle in T+1, T+2,

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1 T+3. With atomic settlement, you can do this within  
2 seconds or minutes, and in an inter -- in a macro  
3 environment, like the one we're in today with high  
4 interest rates, this can create significant  
5 efficiencies, and we've seen at scale proof points  
6 of this. If you look at tokenized repos, which have  
7 reached 70 to 100 billion in daily volumes already  
8 on tokenized assets.

9 The second and third benefits you see here are  
10 tied really to the programmability of the asset.  
11 The fact that you can embed into the asset many of  
12 the operational manual tasks that are done today by  
13 service -- service providers. This creates  
14 efficiencies, also eliminates a degree of risk on  
15 errors that can happen. Coming back to the  
16 interest -- calculation interest payment example,  
17 you would eliminate -- or automate a lot of that  
18 work and eliminate some of the risks associated with  
19 it. And you could also do that from a compliance  
20 checks and audibility standpoint and create that  
21 near real-time transparency that Caroline touched on  
22 earlier.

23 These create obviously efficiencies for service  
24 providers in the ecosystem as a whole, but it also

25 creates quite attractive -- more attractive unique

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1 economics on assets that, in particular, are  
2 operationally intensive. If you think of private  
3 equity funds, for example, where typically the GP  
4 would work with 10 to 50 LPS -- by removing a lot of  
5 those operational tasks effectively that fix cost of  
6 managing an additional investor, or significantly  
7 reducing that, you're able to reduce the entry  
8 ticket that's required to participate in those  
9 investments. It's beneficial to the issuers or  
10 asset owners as you access a pool of capital you  
11 don't have access to today, and it's very attractive  
12 to investors who can access asset classes they don't  
13 necessarily have access to today.

14 And the last one I'll touch briefly on is the  
15 cheaper and more nimble infrastructure. Comes back  
16 to the slides Sandy showed earlier. A lot of this  
17 infrastructure is open source, which foments quite  
18 significantly innovation and allows perfectly anyone  
19 who wants to participate to relatively quickly build  
20 the capabilities in themselves innovate and  
21 participate in the overall ecosystem.

22 Now, while we've seen all these -- all these  
23 benefits, it certainly hasn't fully -- fully scaled.  
24 I think Caroline used the expression that we have an



25 adoption issue, which is -- which is definitely

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1 true. So as we think through our clients and the  
2 conversations that we've had, a few themes are  
3 emerging. One is around the infrastructure itself  
4 and the nascency of the infrastructure. There isn't  
5 institutional grade technology like there is in  
6 traditional capital markets. If you think of the  
7 throughput required, the uptime required for many  
8 capital markets applications, those aren't  
9 necessarily up and running in -- on the blockchain,  
10 and we've seen examples on public networks with  
11 exchanges that potentially could go down for -- for  
12 a few hours.

13 The second challenge is standards. There isn't  
14 necessarily common standards adopted across the  
15 industry, therefore, that means there's  
16 interoperability challenges. There needs to create  
17 what we call bridging protocols, or effectively  
18 technology to communicate between different systems,  
19 and that creates friction and potential risk of  
20 fragmenting liquidity or fragmenting data, which is  
21 in some sense opposite to the whole purpose of  
22 blockchain.

23 The second theme here is what we call the  
24 market immaturity. If you recall the slider on the

25 process of tokenization or the four steps.

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1 Throughout that process, I mentioned anywhere from  
2 five to ten providers that you need to engage. Many  
3 of these are digital natives, or relatively recent  
4 companies that don't have the track record of an  
5 established financial institution; that creates  
6 risk, that creates trust issues, and we all know  
7 what has happened over the last six to 12 months  
8 that can only increase that. So the absence of that  
9 institutional grade and the one-stop-shop credible  
10 provider also creates a challenge in the -- in the  
11 industry.

12 The third point is the short-term business  
13 case -- or the limited short-term business case.  
14 Coming back to what I described earlier as the  
15 digital twin. The fact that there's a model where  
16 you have in parallel the digital native version --  
17 or the digital version of the asset on digital  
18 rails, and the same asset represented on traditional  
19 rails. I mean, you're still incurring a lot of the  
20 costs on the traditional rails. So in order for  
21 that to make sense from a business case standpoint,  
22 it means you have to believe in quite a significant  
23 revenue upside or other potential benefits, which  
24 has created challenges today as there's quite a lot

25 of capital required upfront to setup this -- this

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1 technology.

2 And then briefed on the two other themes. I  
3 think we touched on the regulatory clarity, and the  
4 different regulatory frameworks that exist in  
5 different geographies; that, again, creates  
6 insufficient visibility for institutions to -- to  
7 necessarily participate or scale.

8 And then, lastly, industry alignment. As with  
9 any technological shifts, it creates opportunities,  
10 it also creates threats. Different participants  
11 cite to participate in different ways. And what  
12 we're seeing with -- again, coming back to this  
13 digital twin model. It's important for incumbents  
14 to participate. So if the incumbents aren't  
15 necessarily participating fully or differently in  
16 aligned fashion, it again slows down the potential  
17 adoption.

18 Nonetheless, there's signs to be quite  
19 optimistic about the -- the continued evolution.

20 One. There is a growing institutional  
21 interest. The fact that we're having this  
22 conversation. There are also signs of proof points  
23 that have scaled. I mentioned earlier tokenized  
24 repo. There's others out there. So I'll touch on a

1 One is significant advance in cash  
2 tokenization. So we -- I mentioned a bunch of  
3 assets, but cash is one that can be tokenized.  
4 There's two interesting points around cash  
5 tokenization. One is just -- it's a proof point  
6 itself. We've reached about 120 billion in  
7 tokenized cash in circulation today. And the second  
8 is it's a critical enabler for the rest of token --  
9 of assets to be tokenized. It's what we call -- you  
10 may have heard the -- on-ramp or off-ramp. The  
11 ability for anyone who's operating in traditional  
12 judicial ecosystem to also be able to operate on --  
13 on blockchain. And so that has significantly  
14 advanced in the last -- in the last 12 months.

15 The second one is the better short-term  
16 business case fundamentals. So I touched on the  
17 challenging business case earlier. For some asset  
18 classes there's differences in the macro environment  
19 that allow a better business case right now. If you  
20 think of higher interest rates for asset classes  
21 such as repos or others that have short-term  
22 liquidity needs, that creates an improved market  
23 condition that improves the unique economics for  
24 those -- for those assets. And as you -- as

25 institutions think through tokenization, it's

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1 important to think through asset by assets the best  
2 benefits will be very different, and there are some  
3 assets that today are more prone to potential  
4 tokenization than others that would be a leader  
5 later in time.

6 MR. SEVILLANO: And I guess the last two  
7 pieces -- if we talk about the emerging regulatory  
8 framework. Let's go back so as soon as -- yeah,  
9 let's finish this slide first. Thanks.

10 If we think about the emerging regulatory  
11 frameworks outside the U.S., right. In the past six  
12 months, we've actually seen a lot of progress. You  
13 can see micro, as an example, not directly related  
14 to tokenization but indirectly I think actually  
15 provides a framework for licensing and some level of  
16 permissibility of the types of activities that can  
17 be performed, which I think is important for  
18 regulatory certainty.

19 You are seeing similar frameworks kind of  
20 working their way through Hong Kong, Singapore Japan  
21 the UK, UAE as well. And you're seeing actually,  
22 you know firms, actually -- there's a lot of  
23 interest in lice- -- in licensing and then working  
24 in those jurisdictions as well.

25 So this level of regulatory certainty, I think,

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1 is one that will be -- could be a very significant  
2 enabler. In the U.S. -- you know, market  
3 participants have been exploring and working on  
4 tokenization in different distribution approaches  
5 but, really, largely leveraging, kind of, existing  
6 rules and guidance, you know, to mitigate the impact  
7 of current regulatory uncertainty; that creates some  
8 limitations to what you can and can't do, but on the  
9 other hand, I think that there's also proof points  
10 to suggest that -- you know, that's how regulation  
11 is developed. You know, it's always  
12 principle-based, right; it's not necessarily  
13 technology-based, and so I think that's an area  
14 where I think we have seen some progress, most  
15 definitely.

16 And the last point, I think we talked about  
17 already, is kind of what -- you know, the challenges  
18 in increasing market readiness and infrastructure  
19 maturity. There we have also seen a significant  
20 amount of investment and progress, right. I  
21 think -- you know, I mentioned at the beginning of  
22 the presentation that you really need to think about  
23 the tenets of security reliability and throughput or  
24 speed, and in the ideal world, you shouldn't be

25 compromising on any one of those things.

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1 I spent a big part of my career at Visa. And  
2 all that Visa thinks about is, you've got this  
3 thing -- your card has to work 24/7, 365 no matter  
4 what, right. And so if you think about that level  
5 of certainty and reliability, that's what needs to  
6 be achieved, right, and so how do we think about  
7 doing that. And I think what we're seeing right now  
8 is we are seeing several firms developing  
9 institutional-grade solutions and working with  
10 traditional financial institutions to test those out  
11 with different use cases. We're seeing large  
12 companies and large firms -- large traditional  
13 financial solutions higher teams of 50-plus people  
14 and continue to grow and truly invest in the future;  
15 not in the short-term.

16 We think that this -- that it's a -- there's a  
17 nascent understanding of the technology, but the  
18 promise has actually shown, you know, that -- you  
19 actually see the promise in the actual activity that  
20 market participants are actually making.

21 So we -- you know, this is -- this is a key  
22 area where we actually see, you know, a lot of very  
23 positive momentum occurring.

24 So if we move to the last slide.

25        So what happens next, right. What can -- what

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1    can the industry do. We really kind of see four  
2    areas where we -- we like to think that, you know,  
3    the industry collectively could really think through  
4    this. The first is -- let's just re-examine the  
5    underlying business case, right. This speaks to  
6    kind of, Well, why was it that -- why is it that  
7    tokenization isn't yet a trillion-dollar industry,  
8    right. Well, we really need to think about what  
9    benefits -- you're not tokenizing for the  
10    tokenizing's sake. You're tokenizing to achieve  
11    some sort of benefit and -- you know, related -- you  
12    know, spoke to kind of what those are from cost  
13    efficiencies, perspective and potential revenue  
14    opportunities, perspective. Those dynamics change  
15    depending on any type -- whatever the use case is,  
16    and the context that you're actually leveraging the  
17    underlying technology for. That's an area that you  
18    really need to think about, and you also need to  
19    think about that in the evolving macroeconomic  
20    environment.

21        I would also suggest that you're not just  
22    thinking about the benefits, you're also thinking  
23    about what -- you know, are you at-risk of being  
24    disintermediated in particular if you're a



25 traditional financial institution, right. What --

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1 could this technology be an enabler, or could it  
2 disrupt your business model, right. And at what  
3 point do you think about doing something, right, to  
4 basically -- you know, to manage that risk in one  
5 way or shape or form, right. So I would think about  
6 that as well.

7 The second piece is building out the tech and  
8 risk capabilities. And so here, kind of regardless  
9 of the position in the value chain, a few  
10 capabilities are necessary to prepare the -- you  
11 know, for a world in which such assets and use cases  
12 are tokenized.

13 First and foremost it's key to build basic  
14 understanding of the technology and the associated  
15 risks. So, for example, if you're working with --  
16 within a very large financial institution, you have  
17 hundreds of people that really need to understand  
18 this underlying technology, right. That's not easy  
19 to take -- to build that out. And in order --  
20 because they need to be able to manage it, they need  
21 to understand it, they need to be able to understand  
22 the underlying risk. So there's -- there's a lot  
23 that needs to be done there.

24 And there's a lot of new concepts such as:

1 operations, et cetera. And, you know, there's also  
2 an understanding that these -- the underlying  
3 principles could also help and form conversations  
4 with regulators and customers, right, still getting  
5 up to speed. And I think -- here's really the  
6 takeaway here. The key is to focus on existing risk  
7 management frameworks, right. Traditional financial  
8 institutions have very strong and hardened risk and  
9 compliance programs. How do you take those risk and  
10 compliance frameworks, interrogate them so that you  
11 can understand how they need to be adopted or  
12 enhanced to address specific risks that digital  
13 assets and blockchain technology present. And,  
14 conversely, how the new technology might actually  
15 reduce some risks, right. And if you can understand  
16 that that's -- that's really I think the key to this  
17 second piece of building out the tech and risk  
18 capabilities.

19 The third piece is really forming ecosystem  
20 relationships, particularly for asterisk  
21 distribution but more broadly. And this form is an  
22 amazing example of where you really build kind of  
23 that ecosystem and where you kind of can work  
24 collaboratively to really understand what those are.

25 And, you know, using the example of tokenization,

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1 Mateo also mentioned this is right now mostly a very  
2 fragmented market. If you want it -- if an  
3 issuer -- you know, from the time you get from an  
4 issuer to a investor, there are multiple parties  
5 that creates a lot of complexity. It creates a lot  
6 of potential risk, and it creates an efficiency.  
7 And, really, you know, that's not the best thing to  
8 do.

9 So I think as the market consolidates a little  
10 bit, it will solve for itself a little bit. But I  
11 think also thinking collectively as an industry  
12 that's -- this is an area -- and I think that's kind  
13 of goes to the fourth point, which is standard  
14 setting, right, thinking about standards.

15 You know, I don't know the number of -- how  
16 many layer one blockchains there are out there.  
17 There are many private, public hybrid, permissioned,  
18 unpermissioned. There are many, right. There are  
19 so many different token standards as well, right.  
20 They're very -- some of them are slightly  
21 interoperable, others are not. I know we're going  
22 to have a great conversation about that in just a  
23 few minutes for a potential solution as well, which  
24 I think is fantastic.

1 creates all kinds of risks. Where we've seen some  
2 very significant exploits has been in that --  
3 specifically in that area. So participating in  
4 standard settings on technology I think is one area  
5 that is incredibly important.

6 Another area that I think is very important is  
7 participating in standard setting on the regulatory  
8 front as well, and thinking about what the rules and  
9 requirements should be, right. I think -- we  
10 talked -- I talked a little bit about regulatory  
11 certainty and how firms need to understand that.  
12 And if you think about that from an investor  
13 perspective that's equally as important. An  
14 investor needs to feel comfortable that the asset  
15 that they are investing in has the same standards of  
16 protection that they do in the traditional real  
17 world, right. They may not understand the  
18 underlying technology. None of us understand how  
19 the iPhone works. Unless you're -- you know, but we  
20 trust it, right. And so this is a higher degree of  
21 that because you're actually trusting with -- with  
22 your -- with your, you know, financial assets. And  
23 so I think setting in those standard settings -- and  
24 I think that the basics is really what you need to

25 think about. We need to think about just basics of

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1 governance risk and control frameworks. What are  
2 those frameworks, and how do we understand how we  
3 abide by those frameworks if we are tokenizing  
4 assets, or if we are leveraged -- you know,  
5 leveraging other financial utilities on -- on --  
6 such as payments and others on the blockchain. And  
7 there are set standards for that. Really -- you  
8 really need to think about how, again, you expand  
9 those standards to really understand these things.  
10 Then we can get into the other things that are  
11 technically challenging and, you know, saying -- I  
12 think you mentioned, Sandy -- or, Caroline, you  
13 mentioned, you know, this -- this is a different  
14 type of an asset, right, a private key. I almost  
15 think about it -- it's actually -- it's so -- you  
16 don't actually own the asset sitting in the  
17 blockchain. You actually own the key to get the  
18 asset, and that's different. So how do you  
19 safeguard that, and how do you manage that. You  
20 know, what is the definition of good control  
21 location and how does it actually apply to a private  
22 key rather than an asset itself.

23 And so these are the types of technical things  
24 that I think the industry should absolutely be

25 thinking about; that they sound boring to most

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1 people, but they are actually -- most of us here are  
2 actually excited about these things because you can  
3 see how the building blocks will really kind of  
4 accelerate the adoption of this -- of this  
5 technology.

6 And so with that, I will conclude.

7 CHAIR HONG: Great, Julian and Matthew, thank  
8 you. This is a helpful framework for both the  
9 Commission as well as the committee to contemplate  
10 as, you know, we look at and think about  
11 tokenization going forward.

12 With that, we'll open up to the room for any  
13 questions or comments.

14 Periane.

15 MS. PERIANE: Thanks, Amy.

16 Julian and Matthew, that was a fantastic  
17 presentation.

18 Julian, I just want to know your focus on Web3  
19 and the Metaverse. We agree that there is a lot of  
20 opportunity in the Metaverse, and a lot of very real  
21 commercial applications. It goes beyond just PDFs  
22 issued on a blockchain and digital art into things  
23 including supply chain. And we're seeing extensive  
24 work being done in the event space. The way that we

25 attend events, the way that we issue tickets to

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1 events, the way that we participate in events. This  
2 has real commercial opportunities.

3 So I wanted to just offer some of our research  
4 at the Chamber of Digital Commerce to the  
5 subcommittee. Caroline and Sandy, very encouraged  
6 that you're going to have a dedicated NFT and  
7 utility token focus within the digital asset  
8 subcommittee. We've done a pretty deep study in  
9 NFTS with our members looking at what are a lot of  
10 the challenges to adoptions. And we're documenting  
11 currently how industry participants are addressing  
12 these challenges. Things like fraud, other risk  
13 controls that need to be addressed. And we'd love  
14 just to take that to the next level leveraging the  
15 platform at the GMAC. So we see a lot of alignment  
16 there and appreciate your insights.

17 CHAIR HONG: Great. Thank you, Periane.

18 Any other questions or comments?

19 Great. Well, thank you very much again for  
20 your presentation.

21 Now we will move to key tokenization  
22 initiatives. International U.S. and EU. Beginning  
23 with a presentation from GMAC member Adam Farkas who  
24 is CEO of the Global Financial Markets Association,

1 Europe, who will speak to the impact of distributed  
2 ledger technology in global capital markets report.  
3 Adam.

4 MR. FARKAS: Thank you.

5 Thank you, Amy, and thank you Commissioner Pham  
6 for giving us the opportunity to speak here and be  
7 part of the GMAC.

8 I think my presentation will be a really good  
9 segue from the previous one because it's going to  
10 look at some specific -- a little bit narrowing down  
11 the focus and looking at specific cases of where DLT  
12 technology can be used in capital markets, in  
13 capital markets transactions.

14 The reference I'm going to use is a recent  
15 report, which GMAC issued together with Boston  
16 Consulting, Clifford Chance & Cravath to actually  
17 look at the -- the potential of DLT in capital  
18 markets.

19 To illustrate the potential in capital markets,  
20 we looked at three use cases -- specific use cases.  
21 One was collateral management the other one was  
22 tokenization of financial assets. And the last one  
23 was sovereign bonds issuance in tokenized format.

24 And following my remark, John O'Neill, who's



25 sitting next to me from HSBC, is going to go through

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1 a specific use case -- a specific transaction, which  
2 is an EIB issuance in a tokenized format.

3 MR. O'NEILL: We think, based on this report  
4 and the study we looked at, and I -- that completely  
5 concurs with the -- with the presentation we have  
6 just heard; that DLT holds a very strong promise for  
7 driving growth and innovation in financial markets.

8 This potential should not be ignored or  
9 prohibited by regulatory oversight and resiliency  
10 measures already exist. Policymaking should focus  
11 on creating a regulatory framework that supports  
12 financial stability, market integrity, and investor  
13 protection and responsible innovation in digital  
14 asset markets while also setting out a level playing  
15 field for both new entrance and existing financial  
16 institutions.

17 If I could go to the first slide -- and I  
18 will -- that slide already gives a little bit of the  
19 answer the colleagues asked before in the previous  
20 presentation. We tried to look at what potential  
21 the use of DLT could bring along in terms of  
22 benefits -- in terms of financial benefits for  
23 capital markets.

24 What we looked at is that by using tokenized

25 securities and using the technology globally, a

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1 saving of about 20 billion annually in clearing.  
2 And settlement costs could be achieved as a  
3 potential -- or another potential huge benefit could  
4 be to free up the -- or add to the liquidity of  
5 about 16 trillion of global assets that are -- that  
6 are sort of sitting these days and relatively -- in  
7 relatively in liquid format. So there -- the  
8 estimates we found are pretty appealing in terms of  
9 potential benefits of deploying DLT in capital  
10 markets.

11 If we look at the next slide, possibly. If you  
12 look at the -- if we try to look at how the DLT  
13 based markets would emerge in terms of phasing --  
14 and this is what we can -- what we can see there.  
15 That there is a phase of experimentation where there  
16 are pilots and experimental transactions that are --  
17 that are -- that are being looked at by market  
18 participants. Then the next phase is  
19 commercialization, and then scaling, which can then  
20 lead to the benefits, which I set out before.  
21 However -- and, again, in full agreement with the --  
22 with the presentation before, we also feel, based on  
23 this analysis of -- of these specifics, that there  
24 are significant barriers still to overcome before we

25 can -- we can talk about uh scaling and reaping all

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1 those -- those benefits and the report goes through

2 these -- these barriers in turn.

3 If we could go to -- to the -- to the next

4 slide.

5 We also looked at what asset classes are

6 offering the best potential. Again, with the --

7 with the introductory presentation, this is -- this

8 is a critical -- a critical question given that --

9 that there is a broad area of potential users but

10 what -- what would be the best ones. What asset

11 classes are offering the best possibilities. And

12 what we -- what we found, in looking at different

13 asset classes -- and you can see it in the -- in the

14 top right quadrant of that -- of that chart is that

15 according to our assessment and member firms

16 assessment, the best opportunities lie in illiquid

17 assets that are currently in -- in very illiquid

18 markets. And within -- within liquid assets, it

19 would -- it would probably be debt securities that

20 are more prone to be successful in tokenized format.

21 So these are -- these are offering, according to --

22 to the report, these are offering the best

23 opportunities to look at. And one of the

24 recommendations we are making is to try to focus

25 the -- the resources and efforts on those asset

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1 classes where the opportunities are the highest.

2 Now, when we look at the -- can we go to the  
3 next -- next slide.

4 When we look at the -- the choice of technology  
5 and the -- and the use cases. How the choice of  
6 technology is determined by the -- by the  
7 transactions by the potential use cases what we --  
8 what we found is that the use case considerations  
9 are driving the decisions about the network time,  
10 which is -- which is being used in terms of private  
11 or public permissioned or non-permissions. And in  
12 the -- in the specific case, this consideration will  
13 be -- will be introduced in detail how this -- how  
14 the use case is actually driving the choice of  
15 the -- of the technology and the type of --  
16 implementation for a specific transaction.

17 Now, in terms of assessing the impact -- and we  
18 could move to -- to the next slide.

19 In terms of assessing the impact um of using  
20 DLT for a specific securities life cycle, what we  
21 try to establish is -- the key drivers that are --  
22 that are behind the impact of how significant the  
23 DLT's impact can be in the lifecycle of that -- of  
24 that security. And what we found is that there are

25 three dimensions driving this impact. One is the

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1 workflow efficiency. If DLT can significantly  
2 improve workflow efficiency then, of course, it's --  
3 it's a much more positive case. Financial  
4 opportunity, and value creation, and incremental  
5 risk mitigation are the other two drivers.

6 And based on -- based on that, we looked at  
7 different -- different parts of the -- of the  
8 lifecycle to determine that these three  
9 dimensions -- how the -- how the impact is  
10 determined by the three dimensions. And you can see  
11 an assessment in the table on this side -- on this  
12 slide.

13 Now, coming to -- trying to get to a  
14 conclusion -- and, again, this will be very, very  
15 similar to the presentation we have -- we have just  
16 heard.

17 We try to establish key recommendations or  
18 calls to action. What could be done to actually  
19 move forward and -- and utilize these -- these  
20 potentials that are -- that are coming out from  
21 here. And we identified five key calls to actions.  
22 One would be to harmonize global regulatory and  
23 legal frameworks for clear and unambiguous  
24 definition of the key terms and risk mitigates

25 required to support the development of a transparent

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1 discipline risk-focused and effective digital market  
2 infrastructure. Again, this is -- this is key. I  
3 think, again, the previous presentation was -- was  
4 excellent in exploring this.

5 The second one we heard it in general but  
6 it's -- it's specifically applicable here. To  
7 enable interoperability by building consensus on  
8 common market standards, and vision for DLT-based  
9 markets to guide market linkages with traditional  
10 market infrastructure; that would, again, facilitate  
11 the -- the application of DLT in capital markets.

12 The third one is to drive faster adoption by  
13 prioritizing resources and asset -- in asset classes  
14 where DLT has the most upside potential to have pull  
15 and deepen liquidity particularly for illiquid  
16 assets. And that, again, refers to that that  
17 quadrant which identify these asset classes.

18 The next one -- the fourth one would be  
19 collaborate on the advancement of DLT to promote  
20 technical solutions including around scalability,  
21 cyber security, and regulatory compliance where  
22 there is already a regulatory framework.

23 And the last one is to continue the development  
24 of DLT-based payment solutions such as tokenized

25 commercial bank money and deposits to facilitate

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1 safe and efficient settlement processes within  
2 the -- in the context of -- of DLT deployed in  
3 capital markets.

4 So, again, in conclusion, we -- we feel that  
5 the introduction of distributed ledger technology  
6 across finance poses a whole new series of  
7 challenges for legal and regulatory frameworks.  
8 Legal structure must deliver clarity of ownership  
9 rights. And this we -- we looked at -- two law  
10 firms were involved in the reports to -- to look at  
11 these things. Settlement finality and robust  
12 insolvency treatment. Regulatory structure --  
13 structures must deliver high levels of investor  
14 protection without impeding the development of new  
15 products and services. But we think that the -- the  
16 subgroup of the -- of the CFTC GMAC will have the  
17 possibility to look -- at look at all these across  
18 jurisdictions, and across asset classes. And I  
19 think we are really hoping that -- that this report  
20 and the work of the -- of the sub group is going  
21 to -- to make a major step forward in -- in coming  
22 to specific recommendations and specific  
23 conclusions.

24 Thank you very much. And I passed the floor to

25 John, who is going to go into a specific --

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1 CHAIR HONG: We will now turn to our next guest  
2 speaker Per von Zelowitz, Director of the New York  
3 Innovation Center of the Federal Reserve,  
4 Bank of New York, with his presentation on  
5 facilitating wholesale digital asset settlement  
6 regulated liability network U.S proof of concept  
7 findings, which was just released on July 6th,  
8 followed by a brief Q&A.

9 You have the floor.

10 MR. von ZELOWITZ: Thank you. And thank you  
11 for inviting me to your event. It's a pleasure to  
12 be here.

13 As was referenced, I'm the director of the New  
14 York Innovation Center at the New York Fed. The New  
15 York Innovation Center is a group within the New  
16 York Fed that's focused on technical research and  
17 experimentation, primarily within the tokenization  
18 and digital asset domain. So we're not building  
19 production systems that will be deployed in the  
20 federal reserve, but we're conducting research to  
21 understand the functionality of new technologies and  
22 new systems.

23 Next slide, please.

24 So I'll start with the ever-present disclaimer



25 that whenever we're referencing things like digital

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1 assets, central bank digital currencies, or CBDC's  
2 by no means does this indicate that the federal  
3 reserve has any intention to launch a CBDC or not.  
4 It's not intended to suggest any sort of policy  
5 recommendations or policy decisions around these  
6 types of instruments or within these domains.

7 The New York Innovation Center and the New York  
8 Fed do not take any position relative to the  
9 appropriateness or otherwise of launching any sort  
10 of central bank digital currency or regulated  
11 digital asset.

12 Next slide, please.

13 So also, as was referenced, we recently  
14 published a series of reports together with a group  
15 of private sector organizations demonstrating the  
16 results of an experiment and proof of concept that  
17 we conducted called the Regulated Liability Network.  
18 And what the Regulated Liability Network was focused  
19 on is really envisioning a theoretical financial  
20 market infrastructure that's designed to facilitate  
21 the exchange and settlement of regulated digital  
22 assets.

23 So it's important to state this is not focused  
24 on any part of the unregulated market. So this has

25 nothing to do with cryptocurrencies, but really

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1 envisions a future state where regulated digital  
2 assets, primarily regulated forms of tokenized  
3 money, exist and a financial market infrastructure  
4 would be required to facilitate the exchange and  
5 settlement of these regulated instruments.

6 Could you go back, sorry to the prior slide.

7 So we focused on two wholesale oriented use  
8 cases, which I'll go into in just a minute. And the  
9 research was really focused in three areas. One was  
10 the business applicability of such a system within  
11 the two use cases that we focused on.

12 Number two was the technical feasibility. So  
13 could we make the technology, the infrastructure  
14 work in the way that we think it should to  
15 facilitate the exchange and settlement of these  
16 instruments.

17 And then, finally, a legal work stream also  
18 that analyzed the potential legal applicability of a  
19 system like this according to -- to current laws.

20 We focused on six demonstrated benefits. So  
21 the goal of the research was really to validate  
22 these benefits, whether they were possible or not,  
23 whether we could demonstrate them or not. And they  
24 included 24/7 atomic settlement, which was

25 referenced earlier. One way we defined atomic

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1 settlement that might be a bit different than some  
2 others define it is both relative to speed, but also  
3 the payment versus payment efficiency and safety of  
4 settlement. So speed is one thing, but also  
5 enabling settlement where all legs of the  
6 transaction settle simultaneously or not at all --  
7 not at all, so conditional settlement. And we  
8 consider separate from that. Operational  
9 efficiency, interoperability, resilience and  
10 ultimately the programmability of the assets.

11 Next slide, please.

12 So a bit more detail on the proof of concept  
13 that we conducted. As I mentioned, this was a  
14 collaboration between a number of different  
15 institutions that you can see here. The number of  
16 financial institutions, to technology vendors, one  
17 law firm. It's also important to reference that  
18 this was not a New York Fed led project. This was  
19 not a New York Innovation Center led project, but we  
20 were simply one equal participant amongst this group  
21 of others that we were collaborating with. And also  
22 it's important to mention that the New York Fed by  
23 no means endorses this as the only way to solve this  
24 type of problem, or perhaps even the best way, but

25 it's really just one opportunity that we had to

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1 experiment with a group of organizations so that we  
2 can learn more about how this might work, and if  
3 something like this did exist, how could the Federal  
4 Reserve or New York Fed interact with this type of  
5 system.

6 And so the proof of concept was tested with  
7 simulated assets, so no real money was used in this  
8 proof of concept. And we targeted two use cases.  
9 So one was a domestic interbank payment. So payment  
10 between two domestic United States banks, and the  
11 other was a single currency cross-border payment.  
12 So a U.S. dollar cross-border payment. And the  
13 denomination of all of the transactions was in U.S.  
14 dollars.

15 Next slide, please.

16 The solution concept that we tested is a  
17 version of what has been referenced as the RLN.  
18 Another term for it is the Unified Ledger. It's  
19 also been called a shared ledger. So to some  
20 extent, it's a matter of semantics. But the design  
21 that we tested was really one of a series of shared  
22 ledgers that different regulated institutions would  
23 have access to and be able to represent certain data  
24 on those different ledgers. There was an aspect of

25 security that's applied to the proof of concept as

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1 well, which ensured that only the counterparties  
2 that were involved in the transaction would have  
3 access to the appropriate data specific to the  
4 transaction. So other counterparties that have  
5 access to the RLN in total, would not have access to  
6 any sensitive data that they would not be party to.

7 So each of the participants that you see here in the  
8 blue boxes, as well as the purple box, which  
9 represents the Fed's ledger, have what we call  
10 partitions on the RLN. And these partitions were  
11 essentially the controlled areas in the shared  
12 ledger that each institution, each counterparty  
13 could control the data that was accessible and on.

14 So this represents the interbank payment use  
15 case. So as you can see on the left-hand side there  
16 would be a Customer A that wishes to pay Customer B  
17 all the way on the right-hand side. And in this  
18 case, the transaction would flow through the  
19 different counterparty banks, as well as the Fed  
20 Reserve, which is providing the settlement asset in  
21 the form of a theoretical wholesale central bank  
22 digital currency to settle the transaction between  
23 the different counterparties.

24 Next slide, please.

25 And then, finally, we published our reports a

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1 couple of weeks ago, and so there are three reports.  
2 The first one, the business report, was co-authored  
3 by the working group that you saw mentioned on the  
4 earlier slide. The technical report was co-authored  
5 by the working group together with digital asset and  
6 settle the two tech vendors that we worked with.  
7 And the final legal report was authored by Sullivan  
8 & Cromwell, the law firm that provided the legal  
9 analysis. So you can access these reports on our  
10 website. If you have haven't seen them already, I'd  
11 encourage you to download them and read them. We  
12 welcome feedback on these reports. So that's what  
13 makes our -- our research better.

14 And, in general, the results of the -- of the  
15 research demonstrated a positive performance Delta  
16 in those six areas that we validated. The  
17 cross-border use case, in general, was more positive  
18 than the domestic interbank use case. And the  
19 general reason for that is that, in general, faster  
20 domestic payment systems work pretty well today, and  
21 there are more problems in cross-border payments.  
22 So there's more opportunity to try and improve  
23 performance in the cross-border space.

24 So with that, thank you, that's the end of the

25 presentation.

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1 CHAIR HONG: Thank you.

2 Do we have any questions or comments in  
3 response to Per's presentation?

4 We'll start -- we'll start with Darcy, and then  
5 we'll move that way.

6 CO-CHAIR BRADBURY: So how long did it take?

7 MR. von ZELOWITZ: How long did it take?

8 CO-CHAIR BRADBURY: Yeah, and did you -- and  
9 you actually, like, made a payment between two  
10 banks?

11 Like, did you build the thing or -- I'm, like,  
12 trying to figure out how far you got.

13 MR. von ZELOWITZ: Sure. Well, we developed a  
14 technical proof of concept together with the two  
15 tech vendors that I mentioned, Digital Asset and  
16 Settle. So there is a technical artifact. There's  
17 technology that enabled and facilitated the exchange  
18 of the tokenized asset. So speed was one aspect of  
19 it that we that we tested. And so, in general, we  
20 demonstrated that these sorts of payments can be  
21 conducted quickly. So for cross-border payments is  
22 one example. The general standard is around T+2  
23 from origination to settlement and finality for a  
24 cross-border payment to be made. So, theoretically,

25 with a system like this, you could reduce that time

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1 to less than a minute, to seconds. So we  
2 demonstrated some ability to do that with this type  
3 of system.

4 What's important to mention, though, with  
5 regards to speed of payment is that technology is  
6 only one piece of the puzzle. There's lots of other  
7 reasons why it takes two days for a payment to  
8 become settled and final, including operational  
9 issues, commercial issues, legal, policy reasons and  
10 other things. So our focus is primarily on  
11 technology. So we were able to solve, at least at a  
12 proof of concept fidelity level, that we could make  
13 it much faster. But, again, for this really to work  
14 in real life there's a whole bunch of other stuff  
15 that needs to be figured out.

16 CO-CHAIR BRADBURY: And then on the domestic  
17 bank-to-bank, you said that one was maybe less  
18 compelling?

19 I don't want to put words in your mouth; that's  
20 not exactly what you said. But is that because the  
21 differential was not so great?

22 MR. von ZELOWITZ: That's basically the reason.  
23 In that fast domestic payment systems -- RTGS  
24 systems today work generally well. So they're



25 relatively fast compared to what's available in the

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1 cross-border environment. So that was the main  
2 reason. Cross-border is just starting at a lower  
3 level essentially relative to domestic.

4 CHAIR HONG: Dave.

5 MR. OLSEN: Thank you, Amy.

6 My name is Dave Olson. I'm representing the  
7 FIA Principal Traders group. Thanks for sharing  
8 that with us.

9 I also have a question about the domestic  
10 interbank settlement pilot that you experimented  
11 with. If what I'm reading in the press is accurate,  
12 FedNow is poised to go live maybe even later this  
13 month.

14 As this body contemplates the use of these new  
15 technologies, one of the things that I'm most  
16 excited about is the immediacy of posting margin  
17 perhaps outside of traditional Fedwire hours.

18 When you went through that workflow, I was  
19 thinking, I wonder how this contrasts with FedNow in  
20 terms of the speed to effectively update the Fed  
21 ledger in a way that is free from some of the  
22 constraints, especially off hours constraints that  
23 the system currently has today?

24 MR. von ZELOWITZ: Absolutely.

1 network research that we've conducted has nothing to  
2 do with FedNow. So these are entirely separate and  
3 distinct pieces of work. FedNow is a real product,  
4 a real solution that's coming to market shortly.

5 This is a science experiment, so there's -- if this  
6 were ever to go to production, there's a lot of work  
7 that remains to be done in order to understand what  
8 that -- whether it's possible, what the design would  
9 be, what its ultimate performance would look like,  
10 those kinds of things.

11 And so two entirely separate and distinct  
12 bodies of work, and really no reference, I would  
13 say, between performance of what is possible with  
14 RLN and what's possible with FedNow. They're  
15 focused on different technologies. They're very --  
16 at very different points in their lifecycle.

17 MR. OLSEN: Indeed. And I found that to be  
18 clear in the way that you walked through it.

19 What I'm curious about is whether some of the  
20 benefits of RLN would already be delivered by  
21 FedNow, or was that outside of the scope and this  
22 was really just a technology proving ground?

23 MR. von ZELOWITZ: It's really outside of the  
24 scope of this work. So the goal of this work was

25 not to compare necessarily with the performance of

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1 FedNow; it's really to test the design of a  
2 theoretical financial market infrastructure focused  
3 on exchange and settlement of tokenized assets.

4 So we're testing from a technology standpoint  
5 the use of distributed ledger technology of a  
6 certain design of tokenized asset. Again, FedNow is  
7 not involved in those sorts of characteristics. So  
8 different things. And I would say contrasting or  
9 comparing the performance was out of the scope of  
10 the work we've done here.

11 CHAIR HONG: Sandy.

12 MS. KAUL: Hi.

13 I was just wondering why you guys chose to do  
14 partitioning, and why you thought that didn't  
15 undermine some of the benefit of being on a  
16 distributed ledger?

17 MR. von ZELOWITZ: Such as what?

18 MS. KAUL: Such as the transparency of the  
19 transactions moving through so everyone can see all  
20 the transactions.

21 MR. von ZELOWITZ: Yeah, it's a good point. So  
22 one of the assumptions that we tested -- and, again,  
23 these are just assumptions. So unclear if this is  
24 the best way to do it, or the only way to do it.

25 But from an assumption standpoint, we wanted to test

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1 the ability for a system to enable the  
2 counterparties to control the data specific to their  
3 transactions in a way that enabled a privacy of the  
4 transactions.

5 So in a typical wholesale payment today,  
6 generally speaking, you don't want everyone else to  
7 know -- know what -- what the details of the  
8 transaction are. You really only want the  
9 counterparties to have access to the appropriate  
10 data information specific to that transaction. So  
11 we tried to mirror that sort of capability more --  
12 that set of requirements in the design of this proof  
13 of concept.

14 So, technically, as you referenced, it's  
15 certainly possible to create a shared ledger that  
16 enables all counterparties to have visibility to all  
17 of the transactions and all of the data that has the  
18 potential theoretically to introduce privacy issues  
19 that would make general -- would make the  
20 counterparties in a general wholesale context  
21 probably uncomfortable.

22 So it's not to say that we couldn't test that,  
23 but we decided that we would test against this one  
24 assumption of privacy.

25 CHAIR HONG: Great. Thank you, Per.

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1 MR. von ZELOWITZ: Thank you.

2 CHAIR HONG: For our final present today --  
3 presentation today on key tokenization initiatives,  
4 we will hear from GMAC Digital Asset markets  
5 subcommittee member John O'Neill, Global Head of  
6 Digital Asset Strategy at HSBC who will discuss the  
7 first European Investment Bank digital bond issuance  
8 in Sterling.

9 John, the floor is yours.

10 MR. O'NEILL: Thank you, Amy.

11 And you've already introduced me, so I don't  
12 need to introduce myself. But as per the other  
13 speakers, thank you very much to Commissioner Pham,  
14 to all the Commissioners, and to the chairs for  
15 inviting me to present this section today.

16 I think as part of the last three  
17 presentations, we've seen a really excellent  
18 presentation from McKinsey in terms of the general  
19 considerations for digital asset markets. I've  
20 never seen that presentation before, and I thought  
21 it was -- really hit the mark.

22 Also a very good presentation from GFMA. We  
23 were very involved, as well as many other banks,  
24 with the report that Adam summarized and presented.

25 So we very much agree with those conclusions. And

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1 then, Per, I think it's fair to say in what you were  
2 presenting was -- as part of RLN, which we've been  
3 part of and very supportive of, is a theoretical  
4 payments use case; that's the way I describe it.

5 You described it as a science experiment, I think --  
6 which, I think, is a good way to describe it.

7 But what we wanted to do in this -- this  
8 section, which I'll present, is present a real-world  
9 use case of a digital asset transfer, and also the  
10 support in payment mechanisms for that. So to bring  
11 up together all these concepts.

12 So maybe if we could just go to the first  
13 slide.

14 Now, the platform that we've built at HSBC over  
15 the course of 2022 -- we launched in February this  
16 year, February 2023, and we launched it with a  
17 transaction with the European Investment Bank. I'll  
18 tell you about the details of the -- the  
19 transaction. But what I will do is go a bit  
20 further, really. And I'll tell you, at HSBC the  
21 considerations that we needed to undertake and build  
22 in our digital asset platform -- the key decisions  
23 we had to make. And I think it's fair talking to  
24 colleagues from other banks, other financial

25 institutions who also have platforms. But these are

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1 general considerations, so my remarks can be taken,  
2 I think, probably as fairly representative of the  
3 kind of decisions that need to be made across the  
4 market.

5 I would also say -- really good points, as I  
6 said, made by McKinsey and GFMA. But I would say  
7 just in very simple terms what you need to do a  
8 financial transaction. I think what you need to do  
9 a financial transaction is you need interested  
10 buyers and sellers. You need law and regulation  
11 that you believe in and trust, and you actually need  
12 to know that your counterpart is good for the money;  
13 that's just a very simple illustration of any  
14 financial transaction. But I think it's exactly the  
15 same for digital asset markets.

16 So first of all, you need participants who are  
17 interested in doing business in this format. You  
18 need issuers -- and we're going to start with fixed  
19 income in the presentation. But you need issuers  
20 who are interested in issuing in this format, and  
21 that might seem like a real statement of the obvious  
22 but it's actually non-trivial because although --  
23 and this committee's absolutely excellent example,  
24 we're talking about these excited -- exciting

25 developments, which are going to be really

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1 interesting and significant for -- I'd say, for  
2 wholesale financial trans -- financial transactions  
3 over the next few years. The simple fact is there  
4 hasn't been that many transactions today, right. So  
5 finding issuers who want to issue in this format is  
6 really significant, and certainly we and some other  
7 of our peers found a very good partner in Investment  
8 Bank, so that's number one.

9 Number two. It's been touched on before, but  
10 I'm really going to emphasize it, law and  
11 regulation. So legal certainty is really vital, and  
12 that can also influence your choice of jurisdiction,  
13 which I'll talk about.

14 And then the third, I said payment certainty.  
15 There's all sorts of payment mechanisms that we have  
16 considered and that we've architected our platform  
17 to be ready for in the future. So there's a complex  
18 discussion, which we're not going to get in today.  
19 Although they're referred to about central bank  
20 digital currencies, but certainly we think those  
21 have potential if they exist to support financial  
22 market transactions in central bank money. And we  
23 also think stable coins and even some forms of  
24 cryptocurrencies do have potential, but we don't



25 think those are ready for prime time. We don't

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1 think they're ready today. So I'll tell you about  
2 the approach that we've taken to support really safe  
3 transfers of digital money in a second.

4 And before we move on from this slide.  
5 Clearly, as I said, this is a transaction in Europe;  
6 it's the European Investment Bank. And just to be  
7 clear, for HSBC, our platform is currently also  
8 located in Europe, but we have global ambitions for  
9 it. And so everything I say I think, I hope, and  
10 believe will be globally applicable in  
11 particularly -- obviously today we're focused on  
12 maybe lessons that can be allowed for the U.S. and  
13 things that we can do to accelerate the development  
14 of digital asset markets in the U.S. So I'll go  
15 through all of those as we move through.

16 Maybe we can go to the first slide.

17 Okay. So to support this issuance from the  
18 European Investment Bank, as I said, our platform is  
19 called HSBC Orion. So this is just a very simple  
20 slide of what, how, and why. Why should you care  
21 about these kinds of markets.

22 So we call Orion our strategic platform for  
23 asset tokenization. The point worth expanding on  
24 there, I think, is, as Adam said in his

25 presentation, there's always a discussion about

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1 which markets do you start with. And we think the  
2 real value add here is not hyperliquid markets. We  
3 don't think it's FX or stock trading. We think a  
4 lot of the benefits of DLT can be realized for  
5 somewhat illiquid markets. But that doesn't mean  
6 necessarily highly liquid markets. We really think  
7 the sweet spot is fixed income, it's bonds. And our  
8 competitors and peers have reached the same  
9 conclusion because many of us have been focused on  
10 fixed income markets.

11 In terms of law and regulation, you can see .3  
12 there. Our platform is located in Luxembourg. And  
13 we're often asked a lot, Why would you put the  
14 platform in Luxembourg. I think HSBC obviously  
15 operates in a very large number of locations  
16 includes -- certainly New York is very important for  
17 us. But probably when people think of HSBC, most  
18 often they think of London, Hong Kong. There's the  
19 two locations people tend to think of. So we're  
20 often asked Why in Luxembourg? Well, we do have an  
21 important presence in Luxembourg, and it's obviously  
22 a major financial center. But there's a very  
23 particular reason, which I think is important for  
24 this, that we're in Luxembourg. We just think

25 Luxembourg has a very good law and regulation on

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1 digital assets. So when the European Investment  
2 Bank approached us at the end of 2021, we said to  
3 them, We want to do a financial transaction with  
4 them, but we wanted to build what we always called  
5 an industrial platform. We didn't want it to be an  
6 experimental transaction. We wanted to build a  
7 platform, which would support other issuances in the  
8 future, which is what our platform does. But the  
9 first decision we had to make as well is where to  
10 locate the platform. What we found in Luxembourg --  
11 and I think there's lessons here for all  
12 jurisdictions and maybe of interest to the U.S. --  
13 is we found a really excellent dedicated blockchain  
14 regime. So there's been several stages to that, but  
15 the most recent is a 2021 law in Luxembourg. And  
16 what that law means, just in a nutshell, very short  
17 order, is that you can obtain a regulatory status in  
18 Luxembourg called a central account keeper. If  
19 you're a central account keeper what that means is  
20 that you can operate a platform -- we're the first.  
21 And so far we're only to be awarded that status.  
22 You can operate a platform like Orion, and on that  
23 platform if you transfer tokens to market  
24 participants, those equate to title transfer.

25 Okay. So a line in token transfer and asset

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1 transfer is really important. And going to one of  
2 the points that McKinsey made. What that enables  
3 you to do is create natively digital assets. So  
4 what we're doing here is creating assets on a chain.  
5 These aren't tokenized copies of other assets. That  
6 is a valid approach. And, by the way, we've done  
7 some transactions that do use that approach, but  
8 what we think is really exciting, unleash the  
9 potential here, is to issue natively digital assets.

10 And I'll expand on why that really makes a  
11 difference in a second. This particular transaction  
12 0.4 is 50 million Sterling with the European  
13 Investment Bank.

14 Again, just to be really honest, 50 million  
15 Sterling for the European Investment Bank is not a  
16 big transaction, right. So the transactions in this  
17 market so far have been 50 to 100 million of the  
18 currency, a benchmark issue like the ERB would be 1  
19 or 2 billion, okay.

20 So what you can see is these are real  
21 transactions, they're not experiments. We're all  
22 learning lessons, and we can go larger and do more  
23 in future.

24 How can investors get involved. I'm not going

25 to read all the text on the slide, but I think this

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1 illustrates a very important point, which is KYC,  
2 right, and market access. What I don't think would  
3 be smart, which is why we haven't done it. Would be  
4 to build a very technical interesting platform and  
5 then go to market participants and say, It'll only  
6 take you six or 12 months to build to our platform.  
7 Market participants have better things to do, right.  
8 So ease of access is really important, and we've  
9 achieved that with Orion. The way we do that is you  
10 come in via custody relationships.

11 So that's easy for counterparties to access the  
12 platform, but also it's safe for us as a platform  
13 operator because every one of those platforms is KYC  
14 to leveraging current market infrastructure but  
15 realizing the potential of digital assets doing it  
16 in a natively digital way we think is the way to do  
17 this, and I think it's fair to say some of our  
18 competitors have done it in a similar way as well.  
19 So I'd say we think that's an important lesson.

20 And then on the right-hand panel. Why should  
21 investors get involved. This is the what's the  
22 point question, right. So we spent a lot of time  
23 talking about blockchain and digital assets.  
24 Ultimately, as market participants, why should --

25 why should they care. Why is it better to do things

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1 in this format. There's a lot of complexity here  
2 and, again, the earlier presentations I think did a  
3 very good job, but I think overwhelmingly it's two  
4 things. The first is fractionalization. I think  
5 it's very interesting to be able to offer fractional  
6 versions of assets so that in terms of syndication  
7 and other things, that offers a lot of potential. I  
8 think probably the biggest one of all actually is  
9 quicker title transfer, quicker settlement finality.  
10 If you can settle financial market transactions not  
11 in several days, there's no reason you should have  
12 to wait several days these days. If you can settle  
13 them in real time -- near real time, well, that  
14 frees up trapped assets, it frees up cash. It will  
15 also, I predict, lead to market structure change in  
16 the medium term, and that's really exciting because  
17 you can -- if you see that market structure change  
18 happening due to quicker settlements, I think you're  
19 going to really see the potential of this  
20 technology. So those are some general points I'd  
21 make.

22 Maybe we can move to the next slide.

23 So this is obviously a technical -- very high  
24 level -- but a technical illustration of our

25 platform. And what you'll usually see is there's

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1 two sides to it, okay. So there's the side in red,  
2 on the left-hand side, which is a private network.  
3 There's also a public network, which is on the  
4 right-hand side. And one real theme, right, Adam in  
5 the GMAC presentation, is there's a lot of  
6 discussion across the industry of should private or  
7 public networks prevail. You'll hear people get  
8 pretty passionate about this. You'll hear some  
9 people say only private networks can be trusted and  
10 public networks aren't suitable for these kind of  
11 transactions. You'll hear other people say, private  
12 networks aren't particularly useful. They aren't  
13 particularly valuable, and everything needs to be on  
14 a public network in order to achieve the potential.  
15 We're not at all ideological about this. We think  
16 it's very important to be practical. We think both  
17 public and private networks really have value. But  
18 our own decision -- and we respect other decisions.  
19 By our own decision is that as of now, mid-2023, we  
20 think the safest and most secure way to do  
21 transactions is on a private ledger, and that's the  
22 left-hand side. But we also think public networks  
23 have a lot of potential. So I'll tell you about the  
24 right-hand side also in a second.

25 But if you can see that diagram on the

200

1 left-hand side where you can see right at the heart  
2 of it, BVP. You can see a bond token. You can see  
3 a settlement token. So let me just illustrate the  
4 action here. What really happens on a platform like  
5 this.

6 You build a private ledger, which is behind our  
7 firewalls, behind our cybersecurity. So we're very  
8 confident. We've built that ourselves; it's our  
9 intellectual property. But we've used vendors,  
10 including partners who are in the room today, to  
11 help build out that technology. What that means is  
12 you can issue, if you have the right legal and  
13 regulatory status, which I explained -- you can  
14 issue a bond onto that ledger and that exists as  
15 tokens. So what that means is it's not a copy of an  
16 existing bond. The bond is tokens. And, again, if  
17 everyone in this room is a participant on the  
18 platform, I'll send you a bond token if you want to  
19 do a transaction with me. And when you have the  
20 bond token, that actually does equate to title  
21 transfer, that's the really key thing.

22 But you can also see settlement token -- and I  
23 hope you can see from the graphic -- that's money.  
24 How do you settle these transactions. Well, you can



25 use CBDC's, if they existed. You could also

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1 consider using stable coins and crypto, but we don't  
2 think they're ready today. We don't think they're  
3 safe or reliable.

4 What we've done is tokenize commercial bank  
5 money. So as HSBC and any large international bank,  
6 we create money all the time. We create commercial  
7 bank money. We've tokenized that at the heart of  
8 the platform. So what we say is that when you do a  
9 transaction on the platform, because it's natively  
10 digital, you do a digital delivery versus payment.  
11 You swap a bond token for a money token,  
12 essentially. So that's the heart of the platform.

13 By the way, I'm running out of time, so I'll go  
14 slightly faster. But what you can also see on the  
15 left-hand side in the bullet points below the  
16 graphic, is that of everything that legally matters.  
17 So it's that private chain, the regulatory status,  
18 the transfer of tokens. All of those equate to a  
19 title transfer. And if we had more time, I could  
20 tell you about the legal arrangements that platform  
21 operations, the way we separate some of the  
22 activities of operating the platform from the rest  
23 of our business. But you come in -- the key point  
24 is, I made on the previous slide, albeit custody

1 I'm just going to say one point about the  
2 previous slide before we move on, which is that  
3 prime -- that public side is really interesting.  
4 We've built a public side because we think it has a  
5 lot of potential for the future. At the moment it's  
6 a copy. It's a mirror. That's quite deliberate.

7 So if you're a market -- a counterparty who  
8 owns some of this EIB bond, most likely you'll use  
9 the left-hand side. You'll use the private side,  
10 and you'll -- the bond will have an icing. It will  
11 be registered in the normal way of your custody  
12 systems. But if you want to, and it's optional, you  
13 can go out onto a public network it's Ethereum --  
14 Ethereum Mainnet. You can find your tokens out  
15 there on the public network. You find them using a  
16 cryptographic key, which is particular to you, and  
17 you can identify your transactions on the public  
18 network. So we think that's got a lot of potential.

19 This slide just expands on what I've said,  
20 really, which is: If you think these platforms  
21 really are about managing and moving tokens in a  
22 secure manner -- you've got the bond token, you've  
23 got a settlement token for the money, you also have  
24 a couple of other tokens, you have a primary

25 insurance token. So you put the token out there

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1 when you do the 50 million issuance, but then you  
2 also you have the public information tokens on the  
3 right-hand side, which are our standard tokens out  
4 there on Ethereum.

5 Maybe we could just go to the next slide. And  
6 this is actually the last slide, although I'd like  
7 to take any questions.

8 But what we'll illustrating on this slide  
9 overall is, again, something really basic. But I  
10 think that there's -- stating explicitly, which is  
11 the way these markets will succeed -- the way  
12 digital markets, digital platforms will succeed is  
13 if they're as liquid as current markets. This is  
14 all about liquidity. And for liquidity, you need  
15 secondary market transactions. We have done  
16 secondary market transactions for this ELB Bond on  
17 Orion. But in order to facilitate even more  
18 liquidity, we're adding in new custodians, not just  
19 the launch custodians for the ELB Bond. We have the  
20 capability to transact in different currencies on  
21 the platforms, and we're linking it geographically  
22 to other markets globally. So that the markets you  
23 might expect.

24 Also to facilitate -- liquidity repo is really

25 important. So we're connecting to repo counter

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1 parties, and we're also looking at the way we can  
2 operate a cross between this platform at HSBC, our  
3 platform, and other platforms, other banks. And we  
4 think there's some exciting developments and more to  
5 discuss on that in the future.

6 So overall, just wrapping up in the interest of  
7 time, what I would say is: Key lessons to build a  
8 practical platform in 2023, think about law and  
9 regulation, and we would encourage all jurisdictions  
10 who want to be competitive to really think deeply  
11 about the right laws and regulation in place.  
12 Choose your form of digital money. Make sure it's  
13 safe, it's reliable; that your counterparties can  
14 access it. And I think if those two ingredients are  
15 in place and there's more platforms -- what we're  
16 already seeing is more counterparties who want to  
17 issue in this format and really realize that  
18 potential particularly in terms of title transfer.

19 CHAIR HONG: Great, John, thank you.

20 As we wrap up Panel 3, are there any additional  
21 questions or comments that people would like to  
22 make?

23 Great. Thank you to our panelists. We will  
24 move into the last segment of the day, which will be

25 member presentations followed by open discussion.

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1 We'll just go in sequence. So first I'd like to  
2 recognize GMAC digital asset market subcommittee  
3 Co-chair Sandy Kaul of Franklin Templeton.

4 MS. KAUL: Thank you so much.

5 So they asked us to talk a little bit about the  
6 work we're doing in this digital asset space.

7 So Franklin Templeton, we feel, has taken a  
8 very positive attitude towards digital assets.  
9 We've been engaged in the space for several years  
10 now. We started by wanting to test the efficiency  
11 of distributed ledger technology by tokenizing a  
12 mutual fund structure. Franklin Templeton does run  
13 its own transfer agent system, and we felt that  
14 being able to move that transfer agent system onto  
15 the public blockchain could potentially unlock  
16 significant benefits. We found -- though we started  
17 so early, there weren't many components to help us,  
18 so we ended up building our own digital wallet  
19 system.

20 We built a hot and cold wallet system, which  
21 we've since patented; that we link to the KYC AML  
22 for a client that acts as a subcustodial wallet. We  
23 built our own transfer agency system that operates  
24 on the public blockchain, and then we tokenized a

1 for our transfer agency, in parallel for the SEC,  
2 with the traditional transfer agency system for a  
3 period of eight months. And after eight months, the  
4 SEC gave us the "no objection" that allowed us to  
5 begin to actually issue shares of the government  
6 money market fund on the public blockchain.

7 These -- to the example we were using  
8 earlier -- are digitally native tokens. There are  
9 no underlying shares that are being tokenized. When  
10 you buy into the fund, you actually purchase the  
11 tokens. We have both a retail app that people can  
12 download to directly trade the tokens after they go  
13 through a KYC process. We also have an  
14 institutional portal that ties into the Fedwire  
15 system for money movements in and out. We've just  
16 recently gotten to over 300 million in assets under  
17 management in tokenized government bond funds, money  
18 market funds. And we have expanded from the  
19 original chain where we built the application, which  
20 was the Stellar blockchain, who's been a great  
21 partner. We've extended to the Polygon blockchain  
22 as well, who's been a great partner, and we will be  
23 looking to extend to other chains over the coming  
24 months, and there'll be more announcements on that

25 later this summer.

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1 In addition to what we've been doing with  
2 tokenized money market funds and transfer agency, we  
3 have also built out a broad native digital asset  
4 practice. In our view, we view these new blockchain  
5 ecosystems as digital nation states. They have  
6 their own currencies. They have their own  
7 governance. They have their own transaction rails.  
8 They have entrepreneurs building in these  
9 ecosystems, and they have customers draw driving  
10 transactional revenues and volumes in these  
11 ecosystems.

12 So just like we would, into any other frontier  
13 market, we feel that being able to build out a  
14 research function, being able to build out  
15 portfolios is a critical part of us delivering  
16 growth opportunities to our clients.

17 So we have a research division. We publish  
18 research for our clients on more than 30 different  
19 altcoin, including Bitcoin and Ethereum. We are  
20 putting together -- we have, at this point, ten  
21 model portfolios that we're delivering comprised of  
22 between 15 and 20 altcoins each, which we can  
23 deliver either via an investment management account  
24 or a separately managed account. And we -- because

25 we believe that these are opportunities in a new

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1 sphere where the oversight and governance is  
2 decentralized, we have built out our own node  
3 operations. We are looking to operate rate  
4 verification nodes in each of the networks where  
5 we're making investments so that we can actually be  
6 a participant. And we feel that this is part of our  
7 fiduciary responsibility to really understand the  
8 operation of the different blockchains and the  
9 different protocols.

10 So we're pretty active in the space. We have a  
11 venture capital fund that's doing seed and Series A  
12 investing, and we have lots of other plans coming up  
13 that you guys will hear about over time. But we  
14 really view this as a huge opportunity area and one  
15 where over time, we're going to be able to build  
16 portfolios across different sectors; that will  
17 include companies and tokens really looking at the  
18 same space, centralized and decentralized models.

19 CHAIR HONG: Thank you, Sandy. Thanks for  
20 sharing.

21 Our next speaker joins us virtually. GMAC  
22 digital asset markets subcommittee member Tom  
23 Jessup, President of Fidelity Digital Assets.

24 Hi, Tom.



1 to be with you today.

2 So, hi, everyone, I'm Tom Jessup with Fidelity.

3 We've been fairly active like Franklin Templeton in  
4 the space for a number of years. We started with an  
5 active research and development effort in 2015 where  
6 we started exploring public blockchains, as well as  
7 enterprise blockchains; that rnd effort continues  
8 today.

9 We also launched a commercial business in 2018  
10 giving our clients the ability to buy and sell  
11 native digital asset -- assets like Bitcoin and  
12 Ether. We started with institutions. We've  
13 recently broadened that to individual investors, and  
14 we built an infrastructure that is really agnostic  
15 as to the types of assets we support for our  
16 clients.

17 And so we're very interested in this concept of  
18 tokenization for a couple of reasons. But I would  
19 say primarily meeting a client's demand for a  
20 broader range of investable assets that we, as an  
21 advisor, can bring into our existing businesses and  
22 begin to provide a broader breadth of products to  
23 our clients.

24 At the same time as a "producer of products,"

25 primarily mutual funds, we're also exploring the

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1 technology to see if we can deliver a better  
2 solution to market and really improve upon the  
3 efficiency of what we do today.

4 I think given our experience as a Hands-On  
5 business operators in this space for a couple years  
6 and understand client -- not only the technology but  
7 also client demand, I think there are a couple of  
8 observations that I would just echo from some of the  
9 earlier presentations.

10 I don't think at this point we're dealing with  
11 a technology problem. I think, you know,  
12 technology -- the technology has advanced quite a  
13 bit since our early exploration a number of years  
14 ago; it will continue to advance. I think it was  
15 highlighted in some of the earlier discussions, this  
16 is really more of a market development, or market  
17 structure problem than it is a technology problem.  
18 And in some respects it reminds me of the early days  
19 of e-trading where we had a number of single dealer  
20 platforms competing at's, all looking to establish  
21 primacy in the space. And what we really need to  
22 start thinking about, to scale this capability, is  
23 more standards, more cooperation. I think there  
24 have been some great examples of that cited here

1 I also think from our perspective, maybe one  
2 symptom of that, is we've seen a lot of engagement  
3 with service providers or folks bringing products to  
4 market. For example, are clients interested in a  
5 real estate fund or some other form of new  
6 investment enabled by the blockchain. And I think  
7 the short answer is yes, of course. But the longer  
8 answer is, what is the actual requirement on our  
9 side to integrate that capability into our existing  
10 business processes so that we can deliver a seamless  
11 experience to the client.

12 So we're very engaged with many market  
13 participants in trying to solve that challenge  
14 because ultimately we think our customers benefit by  
15 having a broader range of investment opportunities  
16 available to them.

17 And we would also agree with what's been said  
18 previously; that we think the benefit of this  
19 technology is not so much in areas where there's an  
20 existing, well-functioning, or reasonably  
21 well-functioning market infrastructure. But in  
22 areas where we see more illiquidity or, quite  
23 frankly, just difficulty with most investors in  
24 access to a product that they could benefit from.

25 So we see this as being something that not only

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1 broadens the range of products that we can deliver  
2 to clients, but also perhaps the number of clients  
3 we can deliver them to.

4 So we continue to monitor the space. We built  
5 capabilities through our experimentation where we  
6 can tokenize assets, and we've done some  
7 experimentation on public blockchains, but still  
8 think it's early days and look forward to being, you  
9 know, part of the solution in bringing these  
10 capabilities to a broad range of investors not only  
11 in the U.S. but globally.

12 CHAIR HONG: Thanks, Tom.

13 We will bring it back to the room. And now I  
14 will recognize GMAC member Chris Perkins, President  
15 of CoinFund.

16 MR. PERKINS: Thank you, Commissioner Pham for  
17 your continued leadership. To the Commissioners,  
18 thank you for your service and leadership.

19 While tokenization of financial products holds  
20 great promise to deliver utility, enhanced  
21 accessibility, mitigate risk and reduce costs,  
22 blockchain innovations, including proof of stake  
23 consensus mechanisms, have unlocked new financial  
24 benchmarks and crypto-specific interest rates

25 promised to enable a new generation of financial

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1 products and derivative instruments. For example,  
2 today there are approximately 750,000 validators on  
3 the Ethereum blockchain. Every day those validators  
4 are rewarded for staking their tokens and securing  
5 the blockchain, and they receive additional priority  
6 fees by ecosystem participants for validating their  
7 transactions.

8 A global benchmark for Ethereum staking yields  
9 can be derived by observing the mean annualized rate  
10 of return paid to those validators. And unlike  
11 legacy LIBOR, benchmarks of this nature are  
12 completely transparent, replicable because the data  
13 is fully observable and on chain.

14 Since Ethereum has transition to an  
15 environmentally friendly proof-of-stake validation,  
16 the behavior of this yield paid to validators has  
17 demonstrated that it rises materially during periods  
18 of market stress. Why? Because industry  
19 participants paid higher priority transaction fees  
20 to move assets to the relative safety and soundness  
21 of smart contracts during the FTX and SVB  
22 insolvencies.

23 The staking rate also rises during periods of  
24 positive market activity. In some, it's correlated

25 to activity within the Ethereum ecosystem.

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1 Staking rates can also be derived from other  
2 proof-of-stake blockchains. Staking rates can serve  
3 as both global financial benchmarks and reference  
4 rates for risk transfer. As a forward curve  
5 emerges, staking rates can also be used to inform  
6 valuations as a discount rate, calculate sharp  
7 ratios, and serve as a benchmark for borrowing and  
8 lending. Swaps and listed futures products  
9 referencing staking rates are expected to attract  
10 liquidity as natural hedgers the institutional  
11 stakers seek to hedge out the volatility of their  
12 earnings, while speculators are attracted to the  
13 yield. Basis swaps will emerge as an interest rate  
14 on-ramp for crypto yields.

15 So what are the key takeaways. First, a new  
16 class of crypto native staking rate benchmarks are  
17 emerging as an important innovation that'll catalyze  
18 a new class of financial products.

19 Second. The innate transparency,  
20 observability, and replicability of blockchain-based  
21 staking rates are material improvement over legacy  
22 opaque centralized benchmark processes that were  
23 prone to manipulation and hurt consumers.

24 Third. As I've suggested in the past, U.S

25 market participants continue to be

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1 disproportionately disadvantaged through a lack of  
2 regulated crypto native derivative products.

3 Liquid staking derivatives are expected to  
4 provide a much needed risk management tool for  
5 institutional staking hedgers and other market  
6 participants. Since their yield rates, not crypto  
7 price indices, they may be more accessible to  
8 traditional finance market infrastructure across the  
9 cryptocurrency industry. I can assure you that  
10 innovation continues unabated and Web3 is here to  
11 stay.

12 As jurisdictions across the globe, including  
13 Japan, Hong Kong, Singapore, the EU, UK, and UAE  
14 continue their quest to attract entrepreneurs, drive  
15 their economies forward with proactive nuanced laws  
16 and regulations designed to catalyze responsible  
17 innovation across Web3. I remain hopeful that we  
18 can thoughtfully engage with regulators in the U.S  
19 to drive principles-based outcomes we all desire.

20 Once again, thank Commissioner Pham and the  
21 Commission for establishing the digital asset market  
22 subcommittee. We'll advance this important work.

23 Thank you.

24 CHAIR HONG: Thank you, Chris.

25 Last, but certainly not least, I'd like to

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1 recognize GMAC digital asset market subcommittee  
2 member Nicole Valentine, FinTech Director at the  
3 Milken Institute.

4 MS. VALENTINE: Thank you. Good afternoon.

5 I want to first acknowledge and thank  
6 Commissioner Caroline Pham, Commissioners Johnson,  
7 Mersinger, and Goldman's -- Commissioner Goldsmith  
8 Romero, and Chairs of the subcommittee, as well as  
9 my fellow colleagues here, as members of the digital  
10 asset market subcommittee.

11 I come to this discussion as from the lens of  
12 an economic think tank that believes in the power of  
13 capital markets to solve the most urgent social and  
14 economic challenges to improve lives.

15 At the heart of the Milken's Institute's work,  
16 the idea that economic mobility and prosperity is  
17 possible with open and efficient capital markets and  
18 effective social institutions. As part of our  
19 mission, we are addressing responsible financial  
20 innovation with policymakers and industry leaders.

21 In this moment on the continuum of technology  
22 innovation and financial ecosystem development, we  
23 should ask ourselves what role institutions should  
24 play in fueling innovation, and what role innovation



25 should play in helping institutions achieve their

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1 mission and purpose.

2 As institutions adopt new technologies like the  
3 tokenization of assets, we must both envision the  
4 possibilities of the positive impact on economies  
5 and markets, and the benefits to the end user who  
6 relies upon them. As institutions develop  
7 strategies to tokenize assets, they should consider  
8 how this transition will shape the markets of  
9 tomorrow.

10 I'll frame this in two themes. The first is  
11 tokenization as a tool for trust, and tokenization  
12 as an inclusion opportunity.

13 First. Tokenization as a tool for trust will  
14 provide evidence of value and ownership that is  
15 authentic, complete, reliable and believable.  
16 Institutions will be able to leverage transparent  
17 mutable ledgers to reduce counterparty risk, prevent  
18 fraud, and fight financial crime.

19 Second. Tokenization as an inclusion  
20 opportunity will open new doors of the market  
21 enabling consumers and institutions to tap into  
22 previously unrealized value of existing assets.  
23 Fractionalization can compound this effect creating  
24 new efficiencies and toppling legacy barriers to

25 entry for new participants.

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1 We at the Milken Institute are and will  
2 continue to track the development of institutional  
3 adoption in this space and also track use cases. We  
4 are particularly interested in how these new  
5 frontiers will create opportunities to build wealth  
6 and generate opportunity. Thank you.

7 CHAIR HONG: Thank you very much.

8 With that, we'll open up to member comments and  
9 questions, if any.

10 All right. Well, with that, we will wrap up  
11 the meeting. I will hand it over to Commissioner  
12 Pham for some closing remarks.

13 COMMISSIONER PHAM: Thank you so much, Amy,  
14 and, Darcy, and to all of our members and  
15 subcommittee members, and all of our speakers and  
16 guest speakers.

17 I think what we've seen throughout the  
18 conversation today is that we are looking at and we  
19 are talking about some very serious real world  
20 issues, from the U.S Treasury markets, to other  
21 interest rate markets, and the impact of swap block  
22 sizes on liquidity, how to deal with an increased  
23 volatility environment with increasingly more  
24 shallow depth. All of these issues drastically

25 affect not only the U.S. economy, but the world

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1 economy. Because I think we can all safely say that  
2 truly the global financial system is based on the  
3 U.S Treasury market.

4 And then we talked about tokenization of real  
5 assets and institutional adoption this afternoon.

6 And why -- why do we care? Because one day we may  
7 not talk about tokenized markets. They will just be  
8 markets.

9 As I reflect upon the comments this morning  
10 from NYSE group President Lynn Martin, she said, you  
11 know, 231 years ago when the New York Stock Exchange  
12 was founded on the corner down the street at Wall  
13 and Broad, that was the U.S debt market; it was  
14 under a Buttonwood tree and it was traded by voice.

15 And, in fact, the debt markets continued that way,  
16 trading by voice, until about the last 30 years or  
17 so, as we saw increased electronification of these  
18 debt markets. And now as we look forward, as these  
19 may be digitalized, maybe that's how we look at how  
20 the debt markets will be as we've heard about all of  
21 the useful benefits that could occur from not only  
22 our presentations from McKinsey, from GFMA, and then  
23 a real world use case from HSBC.

24 So I also reflect upon the other comments by

1 deepest most liquid capital markets in the world.  
2 They are the envy of the world. In all of my global  
3 roles and, in particular last year during my  
4 international listening tour and GMAC road show,  
5 every jurisdiction I visited said, Why are you  
6 coming and talking to us when you are the United  
7 States with the deepest and most liquid capital  
8 markets in the world? Where we are trying to figure  
9 out how to spur innovation and investment and to  
10 build our capital markets when all of the best  
11 talent goes to United States because of the  
12 availability of funding and financing at low cost.

13 So I remind us all that the conversations we've  
14 had today really helped to promote not only the CFTC  
15 but, generally, the overall U.S capital markets,  
16 which as I've said, are the foundation of the global  
17 financial system. To make sure that we can continue  
18 to be a leader to increase liquidity and increase  
19 depth to make sure that risk management and price  
20 discovery is most effective and most efficient.

21 Thank you.

22 CHAIR HONG: Thank you, Commissioner Pham, for  
23 a great day today with -- with the global markets  
24 advisory committee.

25 Also, many thanks to Commissioners Mersinger,

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1 Johnson, and Goldsmith Romero, as well as GMAC  
2 members, and subcommittee co-chairs and members for  
3 making my job a little bit easier today, with your  
4 participation and your insights.

5 I jotted down a few words that, you know,  
6 came -- really resonated with me and were utilized a  
7 number of times throughout the course of today,  
8 which I think are helpful principles for the  
9 committee to continue to abide by. Certainty,  
10 reliability, and resilience, urgency and time  
11 sensitivity, data-driven policymaking, collaboration  
12 and innovation, global nature of markets and  
13 interrelatedness across asset classes.

14 I look forward to working with each and every  
15 one of you and the leadership that this committee  
16 and subcommittees will drive. Thank you.

17 CO-CHAIR BRADBURY: So my mind is full. Just  
18 like at our last GMAC meeting, such terrific  
19 presentations. The tokenization thing as I admitted  
20 to Amy this morning is the thing I know the least  
21 about. So I'm not smarter, but I'm starting to  
22 understand the questions, so I really appreciated  
23 all of the different perspectives. And I'm not  
24 buying one of the bonds, but it's kind of

25 interesting that I could, right. You know -- so

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1 anyway, no, really good and people put in a lot of  
2 effort preparing their remarks and pulling together  
3 data. And I'm very excited for the subcommittees to  
4 get to work. So thank you so much, and thank you  
5 for organizing it. And I really appreciate having  
6 Commissioners here putting in the time with us and  
7 really engaging on these important questions.

8 FEDERAL OFFICER RAIMONDI: All right, thank  
9 you, Amy, Darcy. Thank you Commissioner Pham.

10 Thank you to all of you GMAC members and presenters  
11 for your participation at today's meeting. Thank  
12 you Commissioners Mersinger and Johnson for coming  
13 as well. Appreciated very much. This meeting is  
14 now adjourned.

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1           C E R T I F I C A T E

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3       I hereby certify that the foregoing 222 pages  
4 are a complete and accurate transcription, to the best  
5 of my ability, of the electronic recording of the CTC'S  
6 Global Markets Advisory Committee held on July 17th,  
7 2023.

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11       Witness my hand this ^ day of ^, 2023.

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Lisa Adkins

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