Transcript of Payments Innovation Conference:
AI in Payments
October 21, 2025

SUSAN FOLEY. I'm going to introduce our third panel. I'm very excited to have us a group of folks that's going to talk about AI in payments. Our moderator will be Matt Marcus. He's the Co-Founder and CEO of Modern Treasury, a payment infrastructure company focused on the automation of payment movement. And with that, Matt, I turn it over to you. Take it away.

MATT MARCUS. Thank you. We have that coveted after lunch spot, so everyone, stick with us. I just want to thank the Fed for hosting us this week. Governor Waller, thank you. And also we've gotten to work with a lot of the Fed team over the years. And so we've always been very impressed with everyone we get to work with, and just sharing the mission around advancing money movement in the country has been really exciting for us to work on, so thank you all for, you know, supporting that, with the infrastructure you provide.

I'm the Co-Founder and CEO of Modern Treasury. We're a payments infrastructure company that works with fintechs, startups, and public companies, to help them automate money movement. And so we work with companies that provide, you know, critical infrastructure to the economy across all different sectors; real estate, healthcare education, payroll, so forth.

So, I'm excited to get us together to talk about AI and payments. And so we have a great panel here today. I'm going to let everyone introduce themselves in a second. But we'll try to cover a few different areas, because, you know, what does AI and payments mean to you is something we'll cover different areas. We'll talk about agentic commerce a bit. That's a big theme of the day, so we want to make sure to get in there. We'll talk about fraud, which is always top of mind, especially with AI. So, want to make sure we talk about how companies are thinking about that, how you can think about that. AI also impacts our internal processes. So, how do we fight

fraud? How do we build software? How do we advance payments innovation? And so assuming we have time, we'll get there as well. So, that way we can think about how are we pushing the ball forward on innovation in the country. So, with that, we'll kick things over for intros from the panel. We can just go in order here. Great.

CATHIE WOOD. Hi. My name is Cathie Wood. I am Founder and Chief Investment Officer of ARK Invest. We manage roughly 40 billion dollars in equity assets, focused exclusively on technologically enabled disruptive innovation. So, the five major platforms are robotics, energy storage, AI, blockchain technology, and multiomic sequencing. And our focus today, especially, is the convergence among those technologies. And I know that's one reason we're here. So, we're very happy to be here.

And I must say, I want to give a shout out, first of all, to Governor Waller, and to Sunayna. About a year ago, I'm going to say, I found out, she approached me, I think, that you had a director of research on innovation. And I thought, wow, now we're talking. I have never, I hadn't associated the Fed with innovation. But I see how much you all are doing now. And she has been a force, to be sure, working with you, Governor Waller.

ALESIA HAAS. I love that intro. I agree. She has been a force. Alesia Haas. I'm the Chief Financial Officer of Coinbase. Coinbase is one of the first and definitely the largest in the U.S. crypto infrastructure companies, and a company that offers the ability to buy, store, transact, in over 300 crypto assets on our platform. And then increasingly building on chain. We have co-founded USDC, which is the second largest global regulated stablecoin with Circle, and are the largest distributor of stablecoins in the U.S. market and globally, including USDC, PYUSD, and others. And importantly are continuing to build tools for developers for them to build their own crypto solutions, their own payment solutions. I'm excited to be here for this conversation.

EMILY SANDS. I'm Emily Sands. I'm the Head of Data and AI at Stripe. Thank you so much for having us today. Stripe builds programmable financial infrastructure. So, we support millions of businesses around the globe in accepting payments, moving money, and growing efficiently. Those millions of businesses include many SMBs, startups, including most of the AI startups, and also very large enterprises, including about half of the Fortune 100.

RICHARD WIDMANN. Hi, everyone. Thanks for having me. My name is Rich Widmann. I run Google Cloud's global crypto strategy. Our team is really responsible for doing basically three simple things. Not to understate it. The first is our main charge is to think about how large enterprises, like Google, incorporate some of these new technologies, not just in terms of our products, but also into our own kind of financial infrastructure, or enterprise DNA. The second thing that we're responsible for is we recently launched a layer one blockchain called the Universal Ledger, which is built for institutional payments, which has dominated much of the discussion today. And then lastly, we're also responsible for working on large open standards related to agentic payments. Most recently, the agentic payments protocol, or AP2, which we partnered with Coinbase and about 100 others on in terms of thinking about what agentic commerce will look like, what forms of payment will agents use, and how do we complete that trust chain so that users and merchants can transact with AI confidently.

MATT MARCUS. Great. Well, Emily, we'll start with you. Agentic commerce, we've heard about that a bit. What is it?

EMILY SANDS. So, we're all experiencing how AI is shifting, especially over the last year or so, from just knowing, giving you the answer, to doing, executing on your behalf. And that shift from knowing to doing is quite profound. And one of the first industries that it's transforming is commerce, how commerce gets done. Agentic commerce is actually a spectrum,

but I think of it as an agent facilitating a transaction between a buyer, whether a consumer or a business, and a seller. And, you know, if you think about a very simple but powerful consumer experience, like instant checkout in ChatGPT, you can go today and look for a Halloween costume and get recommended costumes from millions of merchants. Maybe they're not all selling costumes. But certainly millions of merchants selling on Etsy. And you can buy direct in one click. And that's, feels slightly more deterministic than maybe the pie in the sky version of agentic. But along the spectrum, you see things like perplexity, travel search, and booking agent, where I can say I want to go to Paris, these are my dates, here's my budget, and it finds the place and finds the hotel and gets the reservations for me on my behalf in a cohesive package.

And so, you know, Stripe has worked with businesses for over a decade, helping them sell wherever customers are. And early days for us, that was helping you sell online and in apps. We also have an in-person payments product with Terminal. And then it was helping businesses sell through platforms and marketplaces. And today, the new wave is agentic. And so we're really working arm in arm with the merchants that run on Stripe, to help understand what is agentic commerce going to demand from economic infrastructure.

I'd say there's, there's two core needs that are sort of bubbling up to the top. One is businesses need to have a way to crisply articulate what they sell, their products, their prices, their inventory, their checkout experience, to agents. And just like there's not one model provider to rule them all, or one model to rule them all, right, we're all switching across providers and switching across models, we also don't believe that there's going to be one agent commerce solution to rule them all. And so we recently announced the agentic commerce protocol, which is a shared standard, a shared language really, that allows merchants to communicate cleanly with agents around what they sell, how they price, and how their products should be shown. We

codeveloped it with OpenAI. Millions of merchants have already adopted it. And we're really excited to see the traction, because a core challenge for businesses of all sizes, but especially small businesses, is making sure that they can efficiently expose who they are and what they sell to these agent facilitators.

The second issue popping up, the second need, which won't surprise anyone in this room, is just fraud, and growing risk vectors in the context of agentic commerce. And these are really multi-party risks, right? So, as the consumer, I want to make sure my payments, credentials are safe. I don't want the agent to see them or use them without my permission. Nor do I want the merchant to see them or use them, unless there's need. As the agent, I actually don't want to be directly in the flow of funds. I don't want to be the merchant of record. I don't want to take on the risk for the transaction. I just want to facilitate the transaction between the consumer and the merchant. And then as the merchant, well, gone are the days when I can just block all bots, right? Those heuristics aren't going to work because they're going to throttle growth. I need to be able to distinguish which are the legitimate transactions from legitimate customers passed through legitimate agents versus which are malicious.

So, you know, we recently released our shared payment token, which is a new, you know, payment infrastructure that allows the agent to tokenize the payments credentials of the consumer, and pass them over safely to the merchant. And as those tokens are passed over, they include fraud scores. The same fraud scores from our radar product, which has been around for over a decade, to help the merchant understand the validity and credibility of that transaction. So, you know, again, early days, I think as we move down the spectrum of I'm just buying a Halloween costume in ChatGPT to I'm really unleashing agents to go do, you know, most of my day to day commerce for me, will continue to evolve the protocol, will continue to evolve the

underlying infrastructure, like the shared payment token. But, however it evolves, it needs to be an open ecosystem. Because, again, many merchants need to be able to sell through many agents. And it needs to work safely for the consumers and the agents and the merchants alike.

MATT MARCUS. And I'm sure the protocol supports different payment methods, but cards is what it's starting with right now, for the most part?

EMILY SANDS. Yep, lots of talk of stables today. But many people still use credit cards, believe it or not. Yeah, so we support over 125 payment methods. And I will also note, you know, I said open as if that's only open across agents or open across merchants, but it's also open across payment providers. So, we are often passing that shared payment token over to the merchant to use on another PSP that they're operating on. And so we really want to make it easy for global customers to engage in agentic commerce. We support over 125 payment methods today. But we also support the shared payment token used on other PSPs.

RICHARD WIDMANN. I think that's one of the, just to chime in here, one of the focuses that we had when we worked on our standard was something similar to this, which is, you know, we should let the consumers and the builders and the merchants kind of pick the path of least resistance, or the path of optimal outcome for them. And it's one of the reasons why when we were talking about this, I think a lot of the discussion around any agent payment protocol was really, what does payment, payments look like today? And how do we make payments today work with agents today? I think our point of view was what will payments look like tomorrow? And when we think about agents and their capabilities in the customer realm, what are some optimal forms of payment today that might be small, but we think have an opportunity to maybe have even a head start in this world? And I think that's one of the reasons why AP2 works with X402, which is the open standard that's, well, it's actually been around for quite some time. I

don't want to bore people with this. But it's been around since the beginning of the internet. But it's basically NHTTP request that's called payment required. And so, in many ways, we actually see stablecoins as an optimal form of payment for agents, because they do facilitate all the things we've been talking about today, which I won't rehash. But I do think it is important, as we think about what merchants want and what consumers want, that we leave the option open to them as opposed to kind of dictating, or even just walking them down the path of inertia that already exists in this space. But I do think there's a lot of unhollowing that still has to happen there. It's still early days, for sure.

EMILY SANDS. And the internet taught businesses that they need to meet customers where they are, which is online. I think agents are teaching businesses that they need to meet intelligence where it is, which sometimes is an MCP servers, and has a bunch of, right, and payment methods, and payment infrastructure will need to evolve to support that.

MATT MARCUS. So, Alesia, going towards stablecoins a little bit, what's been happening there? What are some of the recent developments that you're looking at? And how does that play into this space around agentic commerce?

ALESIA HAAS. I cannot agree more that we need to meet customers where they are. And what customers have shown us is that stablecoins are being rapidly adopted. Stablecoins have crossed 300 billion dollars of market cap. And the two that have been adopted importantly are open infrastructure stablecoins. They are interoperable. They have deep liquidity. They were built on permissionless networks. And I think that's a really important data point around what we're seeing customers adopt. So, they were born from necessity to enable traders and market participants of crypto trading have a U.S. dollar to settle into in a 24/7 market. Regular fiat

dollars did not offer that, because banking hours were not matching the crypto markets. And so as market participants grew accustomed to stablecoins, it's now opened up this door to payments.

And we have three catalysts that have occurred. One is regulatory clarity. And with the GENIUS Act, and for many of you who have been involved in getting that legislation passed into place, I'm really grateful, because it has provided now many market participants with the confidence to come and now build in this space. We are seeing growth and adoption of banks, PSPs, corporates, merchants. Everybody's now saying, okay, this is interesting, let me talk about the benefits of stablecoins. And what payment flows, those could be uniquely suited for in my business. It's not going to fix everybody's problems. There's going to be a lot of credit cards. I fully agree. Just like we text, we e-mail, we send mail. Like we have lots of ways we communicate with data. We're going to have lots of ways we communicate with value and we send value to one another. So, but what we have today is regulatory clarity.

We've also seen blockchain scaling. And so we now, for example, with Base R Layer 2 solution, we do a trillion dollars of monthly volume on Base. We are already at the thousands of transactions per second. This is real. Theoretically, it has no upper limit on its scaling. I think it's important to think about companies that are focused on scaling only. Maybe missing security and/or decentralization. So, this is an important three-legged stool. I will, I don't think it passes notice that AWS was down yesterday, and it impacted a lot of access. Ethereum was not down yesterday. Base was not down yesterday. So, decentralized protocols show a lot of resilience. And that's something to think about when we're talking about creating payment networks.

And there's already things such as optional privacy on Base. The tooling continues to get better. It's much like AI. Like every month, every year, we just see big leaps forward in terms of these technical advancements. So, we’re this dovetails with agentic commerce. Well, we're also

seeing these big leaps forward day by day. I think that stablecoins, much like Emily and much like Rich said, are uniquely suited to agents. Agents can't open a traditional bank account. Like that doesn't get through a bank onboarding process. They can open a wallet. They can be programmed. These are programmable dollars where they can set limits, they can white label the addresses they want to pay with. And as you think about the growing types of machine-to-machine transactions that we're going to have, we think we will grow alongside human to machine transactions, or human to human transactions. But it's going to be a growth of a number of transactions that we see.

And so stablecoins we think are uniquely suited to micropayments. Like it's really hard to do a two-cent payment through any other payment vehicle that we have. It's cost prohibitive, quite candidly. It's not cost prohibitive in a stablecoin. It's uniquely suited then to, hey, go do some code for me. Oh, you need to go buy compute? Great, go buy some more compute power from Google Cloud. Like program that in. Moving with speed. So, I think we think there's a lot of very natural problems that will get involved immediately with stablecoins. And we're just at the beginning. And then as our colleagues have shared, each of us, we are all involved right now in building critical infrastructure. We've talked about x402, which is enabling any developer to seamlessly embed payments now. We are building these as open standards. We are sharing these out for the world for others to build. Because interoperability, adoption, we think will grow to create the most consumer and business benefit. It will lower the cost and create just more inclusion into the financial systems. There will be use cases that will go through different paths. But we believe that this will drive a lot of global adoption of these technologies.

MATT MARCUS. Rich, this morning we heard panelists mention the use case of agents scraping the internet and reading content and making these microtransactions. How do you think

about that, relative to AP2, x402? Are those, is this in that agentic commerce bucket? How do the different technologies support those types of microtransactions?

RICHARD WIDMANN. Yeah, so this is, I don't want to get like too deep in the weeds on the technical side. But like if you're a builder in the audience, right, and you're used to making API calls, and a lot of API calls, honestly, could be done by an agent on behalf of the user. And so whether it's almost like the pay per crawl kind of example that's been used. There's a whole host of others, right? Like we think about it in the context of even just think about bots interacting with websites, or anyone interacting with the website. Really it's kind of funky to payment gate it for a bot right now. But with x402 or some of these agent payment protocols, you actually could have a bot hit a website, it get a 402 request for payment, and then a micropayment could be made to allow that agentic intelligence to basically have some limited access to the site. So, instead of it always being, it's got to be proof of a human, or I'm blocking it entirely because I'm worried about IP or other things. There's actually now another modality for commerce that can take place. And then in that context, you would think like, well, what is the value transfer that should be paid by an agent for looking at a single website page? Maybe it's a couple cents. I don't know. And in that context, a traditional payment method really just wouldn't make sense. So, I think when it comes to anything that involves an API call or hitting a webpage, these things can be wrapped by an agent in some ways and then served either to other agents or users who want to interact. And having a common protocol or standard with which they can make a payment I think is really important. Otherwise, you're just going to end up with really just a bunch of bad phone calls between agents or people and agents trying to get access to a website saying, oh, well, I only accept this, and you haven't sent me the standard payload I'm required in order to authorize this payment. So, I think it's really just about that, that script.

The other thing that I see as an opportunity here is really thinking about how people browse, right, and like the buying experience generally. And so in many ways, I think the agent that we're used to interacting with of yesteryear is this little chat bot that like you go to the insurance site or you go to the Reebok or the Nike website. And those things are pretty much useless unless you really hate this merchant and you want to yell at them and like you're like I just want to talk to somebody, you talk to the chat. But I do think there's an opportunity where websites can become far more optimized for browsing, where an agent actually helps me navigate the website in a way that looks and is far superior than what happens today, which is I go, I type in something for, I'm looking for shoes, it gives me a list of shoes that are for men, size 10 1/2. And I'm just going through very slowly. You could have a personalized experience that I think agents will unlock, where it sort of is doing the hard browsing for you and surfacing up options that it thinks you'll want.

So, again, that's a situation where the agent is playing a role, either by helping the user interface with a system, a website, or with an API of some kind. And then enabling new forms of commerce entirely, right? So, the example of the browser looks exactly like what it is today. It's just an agent optimizes it. But doing API calls wrapped by an agent looks very different than what it looks like today. Usually, developers are getting an API key. They've got to go to the website to put their credit card in, they get the API, they go back, put the API key in their, you know, coding dashboard, then they access it. And that's just a really clunky experience for things like data or any news feeds, pricing feeds and things like that.

So, our view is that it will accelerate in many ways the proliferation of apps that contemplate, we'll call it agentic workflows, or machine to machine interactions. But it will also optimize what I would consider to be like human to digital interactions, or human to web

interactions, in a way that perhaps is probably a little bit more real for folks in this audience as opposed to the developer ecosystem.

MATT MARCUS. So, we heard a little bit about credit cards, stablecoins, then the base infrastructure through the Fed. So, I'd be remiss not to mention FedNow, and the work there also, because we've been doing quite a bit of work on FedNow and the real-time payment schemes at Modern Treasury. And so I think even there too, when we think about agentic commerce, there's potential as those rails progress around the information that's encoded in the payment rails, the requests for pay standard, potentially coming into some of these experiences, opening up other payment methods for the agents. So, I think a central message here is there are different rails available for agentic commerce. It's not just any one of them. But, you know, there's high standards for what the rails need to support.

For Cathie, I was hoping you could talk to us about why this all matters. So, why is it good for, you know, society, the economy, if we have more commerce going through agents?

CATHIE WOOD. Yeah, and I'm learning a lot. Thank you. Oops, here we go. Learning a lot. So, thank you to the panel. You know, it increases my confidence that real economic growth, real GDP growth is going to accelerate. We have had a thesis for some time that productivity gains are going to drive real GDP growth much faster than anyone dares think. And I'll just give you a quick reason. So, if you look at, and bear with me a moment, if you look at the period from 1500 to 1900, there really wasn't any innovation. And according to our chief futurists, analysis, working with academia and so forth, real GDP growth globally in that period was 0.6 percent per year. This was global. Then we had the Industrial Revolution. So, three major innovation platforms back then; internal combustion engine, electricity, and telephone. Real GDP growth with that revolution, and that's the last technology revolution, true technology revolution, multi,

cutting across sectors, real GDP growth increased from 0.6 percent to 3 percent for the last, last 125 years.

We believe that with the breakthroughs like this one, and the productivity gains, because that's really what you're talking about, that are leaning unlocked here, that real GDP growth in the next five years will accelerate to 7 percent plus. And productivity gains, of course, now, that's a global number I'm talking about as well. Productivity gains, knowledge worker productivity gains are the biggest reason. You know, we see productivity gains shifting up into the 4 to 5 percent range, if not higher. So, this definitely increases our confidence. I love the open-source movement and how, you know, I remember in earlier days in tech, and I've been around a long time, there were fist fights at this moment in the evolution of new technologies. We've learned not to do that. But learned about programmability, interoperability, and open source. So, again, it's increasing my confidence that the productivity gains that we are projecting coming out of the five platforms I discussed with blockchain technology and AI, two of the most important, it increases my confidence that these growth expectations will be realized.

MATT MARCUS. The historical number is really interesting there too. And we see so much investment going into AI right now. But how does that compare to what we saw 100 years ago for other similar waves? Is this normal? Is this a lot? Is it worth it?

CATHIE WOOD. Yeah, we equate this to, you know, the investment that took, the massive investment that took place around railroads and the early days of transportation. But what's different about this one is railroads have limits, right? Intelligence and imagination does not. And so we are looking at investment dollars. I know the big question is, is this, is this another tech and telecom bubble? We do not believe that at all. First of all, back then, the seeds for what we are enjoying now had been planted during the 20 years that ended in the tech and

telecom bubble. They were seeds. There was too much capital chasing, too few opportunities too soon. The technology wasn't ready, and the costs were way too high. We did not get the cloud until I was six. Again, there were gleams in the eyes. I remember them. I was in the business at that time. We didn't get the first big breakthrough in AI until deep learning 2012. Even bigger, thanks to Google transformer architecture in 2017.

And I can just give you a sense of how off-base investing was back then. If an analyst had been using something that is central to our research, writes law, they would never have invested in personalized medicine back then. It cost, to sequence the first hold human genome in 2003, 2.7 billion dollars. We were not at a scalable point; 2.73 billion dollars. Today, we're down to 200 dollars. And we have, you know, the convergence now of life sciences in AI. So, seeds back then, flourishing now. And I think, and this is somewhat contrarian, but it does, again, as I said, it does fit with Wright's Law. I think we might be underestimating the impacts of AI. Are there going to be bad investments? Yeah, capital chasing some ridiculous ideas? Always, at this point in the cycle, there are, there are. But given the productivity gains we see being unlocked, we see a lot of this investment as justified now.

MATT MARCUS. Makes sense. So, Rich, how, if you're a leader of public or private institution company, how should you be thinking about this? Like what's too early? What should you be investing in at this point?

RICHARD WIDMANN. Yeah, I mean, this is kind of like the ultimate question I think if you're at a large institution, whether you're, you know, a regulated bank, whether you're in the tech space. So, in many ways, I think this type of discussion, like what's happening here, is actually, you know, very critical to the next step. One, because it creates an opportunity for people to share ideas, in an open way, much like the open standards we've been talking about for

the last 30 minutes, right, not necessarily written in code, but written in, you know, sort of communications and e mails about, hey, we're interested in making the leap. How do we mutualize the risk with the right partners, such that we're all marching forward on this path to innovation and trying to unlock the power of these technologies, without necessarily owning all of the risk ourselves? And so I think, you know, not just the public partners, public private dialogue, but also private partnerships. That's been one of the key things for us. And I already mentioned what that meant to us in the AP2 standard, right? It would really not be a good idea in my view with all the change going on to basically launch a closed source point of view about how payments and agentic models should work.

But even when it comes to some of the technologies we're talking about today, stablecoins in general, our journey has been one of partnership, just straight up. And the reason for that is we cannot do everything ourselves, right? Every institution has its strengths, things it's very good at. It has areas where it needs to supplement where it's not strongest. And so I think that's been the path here is like people who are trying to kind of go it alone, I find that they struggle the most. Maybe it's a build buy partner decision. But that's generally been our point of view, is there are things that we can do well, and we'll be opinionated about, AI is one of those things.

There are things where we know we have partners in our ecosystem where they're the subject matter experts, and, you know, doing a one plus one equals three situation is actually better than us just trying to do that ourselves. And those are our payment partners, it's the custodians at the crypto companies, it's the protocols themselves. We haven't talked about auditability and accountability when it comes to agentic commerce. But that is where blockchain protocols shine. Because right now, if you think about traditional payments and rails, there isn't

really a public auditable record where both agents of the user and of the merchant would actually be able to verify something happened. And so that's, you know, we are trying to work through that layer cake, offer our own technology where we think we have a strength, and then pull in partners where that works. I think that's actually probably we'll all agree with this on the panel is that there's some things that we can do on our own, and then there are some things where we're a little bit better together.

ALESIA HAAS. And I would just encourage all of the companies to listen to their customers. What we're seeing now is that customers are really demanding the products. And they are seeking the benefits. And so listen to your customers. What do they need? And then serve them in the best build buy partner way that you believe that is best for your company.

MATT MARCUS. Yep, talking to customers, always, the best in this.

ALESIA HAAS. Always, customer is always right.

MATT MARCUS. Yeah, customer is always right. Cathie, how do you think for folks here from the public side, how should they be thinking about accelerating this innovation? What's important to support the ecosystem as it's in this moment?

CATHIE WOOD. Well, and I'm going to thank Coinbase for its leadership. I remember in the day when the SEC was suing Coinbase, we were sitting there saying, okay, what do we do about this? And your leadership really helped drive the clarity, the regulatory clarity that we are beginning to enjoy now. So, anything in that score. I would also, I would say, you know, in terms of risk mitigation out there, just from, we are looking at the prediction markets and thinking this could be a real place, again, for more clarity. And we are, we're seeing some. But risk mitigation, in terms of commerce, you know, buying insurance for your air flight, I mean, it's a ridiculous

cost now. If we, if we bring, it's really bringing consumption and investment together. I think that's a convergence that we're seeing more and more. I heard probably 10 years ago Jack Dorsey and Marc Benioff talking about this concept. And I'm hearing, I'm hearing it more and more up here as well. So, this idea that the consumer is involved in deciding how much a risk, you know, covering a risk, insuring against a risk, should cost. So, I would also say this idea in terms of clarity, but also technology, the programmability, open standards, you know, not putting roadblocks in the way there, I think that is going to be critical. Again, we're hearing this on the panel.

And so, you know, I think because our regulatory regime was so hostile, especially against blockchain technology, we are coming through a rubber band stretching. And now it's going. Because everybody, we had a lot of time to think. We did. We had a lot of time to think. And, you know, it might have been a blessing in disguise. We certainly didn't think so at the time. But I think a lot of very good things are happening, because regulators, they understood finally that if we were going to block innovation, it was going to leave our shores. And for goodness' sakes, this is the next generation internet. We started that movement. We should, we should complete it. And we should encourage it, you know, into the rest of the world now that the cost of innovation is collapsing as much as it is.

MATT MARCUS. We're going to move on from agentic commerce to other good things that are happening in the world. So, we'll get back. I can see from the questions we have agentic commerce questions in a bit.

Emily, I was hoping you could talk about how AI is just impacting start up formation, the types of things, and what that people are working on, and what is that demand of the payments infrastructure the AI companies need?

EMILY SANDS. Yeah, so, we talked a lot about agentic. Agentic is a sliver of the AI companies and AI work and AI value being done. And one of the things that's fun about working at Stripe is we get kind of a front row seat to each successive wave of innovation. The current wave is AI. And we are a bit of the skeletal system for AI companies. So, they use us, yes, for payments, but also for billing and for reaching global customers and for tax. And so, you know, over, well, all of the Forbes AI 50 companies that monetize, actually monetize on Stripe, and we get this kind of glimpse into, into what's happening with AI. You mentioned, Richard, the importance of symmetric information. So, maybe I'll share like a few trends in the AI wave we're seeing. And happy to go from there.

The first is just the rapid pace of monetization. Like so many of these companies are private. And so it's a natural question. Is it a bubble? Is there revenue? Is the revenue real? Maybe only investors know. Or the flashy number that someone puts in their press release. But I can tell you from looking at the AI 100 we call it, the 100 AI companies that are highest grossing on Stripe, the monetization is very real. And it's a pace unlike anything we've ever seen before. So, to give you a sense, these AI companies, on average, get to 30 million ARR in just 18 months. If you want to benchmark that with like the 2018 cohort of equally promising top 100 SaaS companies, that's like three, four times as fast. And the earlier cohort, right, you get to 1 million ARR, you get to 1 million ARR in less than a year. Again, four times the pace of earlier SaaS. And part of that is that these companies are going global, basically from day one. Like our AI 100, they finish their first year already selling into 55 markets and having the majority of their revenue come from outside their home market. And that might not surprise you if you're talking about a French startup that also sells into the U.S., but it is also true for U.S. companies selling abroad, right? They're selling models and infrastructure and digital art and music and all sorts of

borderless goods and services. And LLMs are really good at translation. So, it's really easy to go global fast, and to grow revenues very quickly.

The second trend we're seeing is actually in the monetization model. So, traditional SaaS had near zero marginal cost. So, it made sense to sell sort of seek based licenses. But with AI, the cost, the compute cost, the GPU costs, are very real. And so that's breeding whole new monetization models; usage-based billing, right, charge per, per token, per workflow, outcome-based billing. Intercom is a great example. They charge per support ticket resolved. Which is a great way, actually, to tie pricing to the value that they are creating for businesses. And then most recently, like if you look at the companies, you know, starting up over the last couple quarters, we're seeing a growing swath of what people call AI wrappers. And sometimes this is used in a derogatory way. I do not mean it in a derogatory way. These wrappers are brilliant, right? They are bringing an existing LLM that somebody else has and providing a wrapper with the local relationships and domain expertise and data to solve a problem in a vertical industry, right? So, Nabla and Ascribe for heathcare, or Harvey for law, or Studio for architecture, right, and we saw the same thing in SaaS. Started vertical, started horizontal like Salesforce, went vertical, like toast. But the move in AI is happening much faster. And the monetization corollary of this is that these wrappers, because they're built on top of someone else's LLMs, have business models that are inherently tied to the cost of the underlying LLMs. So, increasingly, we're seeing monetization models that track and price in real time to the changes in the underlying LLM costs. You can think of it as like a percentage on top. So, that's the second trend.

The third trend I would say is actually stablecoin. We talked a bunch about cards. But like if you go to Vercel today to use V0, you can buy in stablecoin. That wasn't true just a few months ago. You know, and you can think of many of these AI companies. Shadeform is a great example.

They're a GPU marketplace. They are selling internationally, right? So, ACH isn't an option. And they have high dollar costs, like you're talking thousands of dollars in your transaction. So, international cards are pretty unsavory. You get hit with a 4 1/2 percent fee, and you're likely to be declined at that size. So, 20 percent of their revenue today comes from stablecoins. And we actually ran an experiment with them and learned that half of that 20 percent is fully incremental, as in 10 percent of that business would not be being done at all if stablecoins were not available, because those buyers did not have access to another payment credential that was relevant.

We talked a bit about fraud. But just to state the obvious, like transaction fraud, fraudulent disputes, that's what really matters if you're, you know, a retail company, or traditional SaaS. If you're an AI company, you actually care a bunch about your compute being stolen. So, you care about the full funnel of fraud. You need to know at the time of sign up, is it a bot. You need to know if the person engaging in your free trials are going through serial free trial abuse. You need to know if the person buying your large enterprise program and then burning down your credits is actually going to request a refund and leave you in the red. And so we're seeing, you know, a need for an increasing breadth of fraud related signals well beyond sort of traditional fraudulent disputes.

And then I'll just close with like businesses are now being built in AI Dev tools. Like Vercel, like Replit. And it's not just AI businesses that are being built in AI Dev tools. It's all sorts of businesses. And so payments infrastructure now needs to be deeply embedded in those tools. Because building a business isn't about building a functioning website with a back end and a front end. It's also about supporting transactions and enabling the money flow. And so we have a new product called claimable sandboxes actually, which just lets you build your business in a box right within your AI Dev tool. But I really think in the same way we talked about agentic

commerce, consumers wanting to buy in whatever their AI tool of choice is, we're increasingly seeing the same trend for developers.

CATHIE WOOD. Can I just add one thing to this? In terms of are we in a hype cycle? As we've sized it, by 2030, consumer related, whether it's subscriptions, commerce related or advertising, advertising is going to be a much bigger business. But those three will add up to, by 2030, a trillion dollars in revenue opportunities. And many people will say, well, goodness, you know, we're seeing spending 500 billion dollars by Stargate. And, well, that leaves out sort of the enterprise side. And I know we'll probably get to this in a moment, but the enterprise side. And we think between hardware and software, that is between a 9, well, 8 to 9 trillion-dollar opportunity, and maybe 15 trillion by 2030, for some of the reasons that you're stating. This is moving so quickly. And it is having such a profound impact on businesses so much more quickly than we've ever seen before.

EMILY SANDS. And what does it demand from financial infrastructure? It demands, you know, seamless and fast spin-up of a business to integrate payments. It demands a much more robust and broader set of fraud controls. It demands access to new payment methods, including stablecoins. And it demands economic infrastructure that supports all these new monetization models so that the market can figure out efficiently sort of that intersection of supply and demand.

CATHIE WOOD. Right. And just on, just to close this circle, so we're talking a lot about, yeah, it’s B2B, it’s business to consumer, I think so much of the benefits are coming in, productivity gains. And that doesn't show up on the top line. It can be turned into margins, increased wages, increased R&D, or lower prices. And so I think many people don't understand the other ways this can turn around, other than directly to the top line.

MATT MARCUS. Alesia, we heard Emily mention stablecoins as part of that flow a second ago. And I was hoping to just go back to that to talk about fraud as it relates to stablecoins. How should businesses think about that? Is it more or less than what they see with traditional payment rails?

ALESIA HAAS. It's the same problem with different solutions. So, fraud exists in all payment types. Fraud has existed in credit cards, in checks, in wires, in cash. So, there is fraud in stablecoins. However, stablecoins introduce a whole new set of tools to combat fraud. And I think it's important to think about those as opportunities. It's the first time you can see on chain a permissionless networks. The entire payment flow. You can use that AI and machine learning to look at payment activity and really have better informed fraud models that you can do proactive risk management on. You have the ability for whitelisting and blacklisting various addresses. On a personal basis, on a company level, at an economy level. There's also a concept of freeze and seize, where if a stablecoin ends up in a bad address through proper law enforcement and through proper judicial proceedings, you can freeze that asset and then remit the underlying dollars back to the fraudulent actor. The other thing with merchants is these are final. There's finality in these payments. There isn't a concept of chargebacks with stablecoins. And so from a merchant standpoint, this is a benefit to them. You can still then have different processes to then have reimbursement. But the key here is the tools only get better. As I mentioned earlier, this technology continues to evolve and build. And we are in the earliest days of looking at what fraud prevention is. But we actually see less fraud, quite candidly, on our own systems, coming from stablecoins versus from traditional fiat.

The other benefit, just to Cathie's point, that I wanted to add on, is in the spirit of where the value accrues, the efficiency of building with AI and with blockchain is just a brand-new

paradigm of efficient build. And just a quick anecdote, in looking at reconciliations and making sure that we are then ensuring that the transaction is legitimate, my own team can reconcile our crypto transactions, one person half a day. It's basically all automated. It takes a team of 15 like three full days to reconcile our fiat transactions with all of the payment. So, your back office costs, your settlement risk, you just take a lot of risk of settlement and risk of reconciliation out of the back office that accrues the bottom line.

MATT MARCUS. Does that end up, that ends up helping you just build more at the end of the day.

ALESIA HAAS. Correct.

MATT MARCUS. So, Coinbase pushes out a lot of product. Seems like this probably helps.

ALESIA HAAS. It's all about efficiency. Productivity gains. We can see by the end of the year, half of our code will be written by AI bots. And so that's the equivalent of almost doubling our R&D workforce.

MATT MARCUS. Wow, yeah. Cathie, I'm sure you want to touch on that. I mean, what are the implications of that? I mean, there's a lot more innovation being driven by AI system engineering teams, a lot more R&D there. What was the result of that?

CATHIE WOOD. It's the first place we saw how provocative the productivity gains were going to be. And that as we were doing our forecast, we were having to raise them, you know, as some of the early building blocks came through. So, and it got us to thinking more about that GDP growth number, you know, the productivity gains, again, can be turned around in so many

ways to drive, to drive real GDP growth. So, this panel is increasing my confidence in that forecast.

MATT MARCUS. Yeah, awesome. Well, I think we can move onto the Q&A. Just a reminder, folks can pop questions in here, and I'll take a look as we go. But there are two questions that are sort of similar on here, going back to agentic commerce. They're a form of what are real world places where you can actually use an agent, so use ChatGPT today to make a payment. I'm curious if anyone on the panel has bought something with an agent. We can start there as an anecdote. But, otherwise, what, you know, where are places we can actually use these today?

EMILY SANDS. So, I really did buy my 6-year old's Halloween costume on ChatGPT, instant checkout. It hasn't arrived yet. But we still have like another week, so I feel good. No, it will come. I have tried using Perplexity as travel search and booking agent. Actually, the Paris example, I was going to Paris for a Stripe, Stripe tour in Paris. And then I was staying with my family. And it gave me great recommendations. I did not do the all in one click package, but I could have with one click had it buy my flights and buy my hotels.

MATT MARCUS. Was there a reason you didn't?

EMILY SANDS. The reason I didn't is because my work had already booked my flight, so I actually didn't really need to book it. And then Phia, Bill Gates' daughter's startup, is actually really cool. You can use it for, it's agentic shopping, but it also does like price compare. So, it's sort of an always on agent to figure out the best price for you. And then there's a bunch of niche ones. So, one that I like is Barista Agent. If you have like specific taste in coffee beans, but you want to broaden your aperture, it sounds really niche, but I think it will just give you a sense, like

there's not going to be one agent to rule them all. You go and you tell it like your preferences. I like kind of chocolatey beans. And then it goes out and it like scours the internet. But you have this conversational interface to engage around your bean preferences. And then it buys it and they literally showed up at my door. So, I think there's a lot of examples in the consumer space.

In the B2B space as well, right? You can buy Vercel from within Cursor. You can spin full businesses in V0 with a complete Stripe integration and claim your integration. So, I think we are on the path. But and I think it is still quite controlled, quite deterministic. Humans are still generally making the final call for the basket of things they are buying. And it will be interesting to see kind of the pace of evolution.

RICHARD WIDMANN. Yeah, I think it looks a lot, it feels very similar to me when I was younger and buying things on the internet, and you're like, I don't know if this is actually going to get here or not, but like I hear this is really cool, and my friends said that they ordered it and it showed up. And like I think it just will take time for consumers to build, again, we go back to this point of trust, but also these behavioral patterns around shopping with agents. What we see is very similar to what Emily said, right? We see a lot of what I'll call like paved roads already that kind of unhobble some of these issues that I think we've kind of spotted throughout the panel, where more work needs to be done. But there is a ton of interest, like one of the demos that we did live, actually I think it was on stage at one of the Coinbase events, was, you know, somebody basically using their agent, their Gemini agent, kind of troubleshooting an issue in their house, which is for any of the dads here, this is probably something that's near and dear to your heart. At least it is to mine. And, you know, there's a problem, and they are talking to their agent, and their agent says, hey, give me a second, I'm going to talk, I'm going to go and look for some agents that deal with home improvement. A Lowe's agent comes into the picture, you

know, basically diagnoses the issue, and then it gives him a list of options that he can purchase for this new part. It gives an appliance or something.

And you can actually, the way that we do these demos is we unpack it so you can actually see the messages between the agents, and you kind of almost get to look inside the transactions themselves. In a consumer context, you're not going to see all that. It's going to be abstracted away. But just in that demo, and in that workstream, you can start to see like merchants are realizing how much it will increase the velocity of consumer transactions. It's also going to change the patterns of consumer behaviors, right? Are they thinking about big box stores or are they thinking about showing up here? And what I will say is every single merchant we talk to has an agentic commerce strategy. Because they realize that people are no longer necessarily going to be walking into the stores. But maybe accessing their website via an agent of some kind.

I think the other area where I see it that we've started to tinker internally and shout out to some of the stablecoins that we use, like PYUSD, is actually playing around with treasury management. That's a really nice safe space, because you're within the four walls of your institution. But you can have agents essentially move money from cost centers without really, again, exposing yourself to what I would say is like all the real-world counterparty risks that might be involved in a B2B transaction. And so those are the types of examples that I think are quite interesting, and probably we'll see more folks work on this.

But I have to say, in the crypto space specifically, there are teams that have run at this a thousand miles an hour. And I know there are teams that already today you can use their agent, and by the way, you bring your own agent if you want, to buy things on Amazon. Like order snacks for the office. And that, I think, is, again, they're doing, I would say, all of that unhobbling work that it takes a lot of time. But we're going to start seeing people do that at an aggressively

faster pace. I think the merchants will try and meet them in the middle as they see consumers prefer this path.

ALESIA HAAS. I'll just add on, in crypto, you can have an AI financial advisor that goes and buys crypto, buys the dip, manager well portfolio and crypto, executes all your transactions. And we have a lot of employees internally who will test the bot against their own investments. And so they'll be on chain saying, did I buy the dip right, did I invest in the right dollars? So, it is very, it is moving very quickly. And I think that you will see use cases expand. And I agree with Emily. There's going to be multiple agents of certain multiple use cases. And I think that consumers really are going to lead this wave. And then you're going to see businesses follow up with products and services to argument and support them.

CATHIE WOOD. And I'll just add one thing there. That's very important, because we think the consumer is going to move much faster than enterprises, you know, just, you know, many people think this is about using tools in enterprises. No, it is not. It is about reimagining, reconfiguring your business. That is going to take time. You work with Palantir. We're working, we're only 70 people and we're working with Palantir, because I feel like this is so important and such a big opportunity. And, you know, we're doing this kind of away from the CTO. Not, I mean, he's involved in it. But it has to be kind of orthogonal, because the whole opportunity is orthogonal. So, the MIT study that came out a month or so ago saying, hey, nobody's seeing productivity, this is going to be hard work to set up and really transform. It's going to take time, especially for the large enterprises.

MATT MARCUS. Actually, there's a question about what are the labor economics implications of these productivity gains? Are they offset? So, it sounds like initially not as much. But over time, much more so.

CATHIE WOOD. What's very interesting, and we're experiencing it in our own firm, you know, I thought we wouldn't be hiring many people. But we're hiring more people now. Why? When I go to the finance team, for example, why? This is the easiest thing to automate with AI. And the answer is we don't have time. So, we're hiring very young people who are AI natives. Forget digital natives. AI natives coming in and empowering them to make this happen. So, but in term of labor, I think that's a bigger question. The history of technology is, it is a net job creator. Sure, there's displacement. But, boy, talk about the best time this could happen. Baby boomers I think are retiring. I'm not sure if this is quite the right number; 1.3 million per year. We have immigrants, let's just say the immigrant population growing much less rapidly, and maybe shrinking in here. And so, you know, you hear about truck drivers, you hear about transportation, you know, Hair on Fire, you know, that's such a big employer, they are, you know, these businesses are being hurt by a shortage of labor.

So, we think, you know, if you put into OpenAI or Grok, one of them, what jobs are going to be created in the next five years by AI? And you have to prompt a little further and say we want you to use futurists, science fiction, sure, strategists, economists, technologists, all of that. You will come out with a huge list of jobs. I highly recommend it.

MATT MARCUS. Yeah. Another question we have here is how has consumer privacy improved or at greater risk with agentic payments made with stablecoins? I don't know if anyone wants to take that. Or Rich, it looks like you've got something.

RICHARD WIDMANN. I mean, there's a couple things that I think there's a real opportunity to kind of improve the privacy surface area that consumers have vis a vis the merchants. Right? So, you know, everyone kind of knows the story of they put some information into a website for a merchant, or financial services provider, that individual or that entity has

suffered a hack. And then all of a sudden you have this issue. And so you can really start to create waves. And this is where it dovetails really nicely with some of the innovations that are happening in the blockchain, and generally the cryptography space.

We're experimenting with the idea around basically delegating authority to an agent to reveal certain private information, perhaps to another, another agent, it could be a user on the other end, without actually having to reveal the credential, right? And this is what we call zero knowledge proofs. Google Wallet now allows you to do this with your digital state ID today. For age verification, a very simple way to put it is traditionally we're very used to basically this idea of giving our information to a third party. And then they just keep it forever. And the analogy that I like to go back to is it's kind of like you walk into the bar, and instead of them just looking at the ID, and then they give it back to you and you go get a drink, you hang onto it forever. Even when you leave the bar, they still have your ID. And that's crazy. But that's literally what millions of people do every day. And so zero knowledge proofs kind of create that situation as it should work at the bar, which is they verify your age. In fact, it's even better. They don't even see the rest of the information on the ID. They would just know this person is authorized to be in this location. And then they have what they need from the merchant responsibility standpoint. And you, as the consumer, don't have to worry about the honeypot risk. So, I think that, that chain of trust that we talked about at the beginning of the panel, has an opportunity to make giant leaps, both as it relates to privacy, but also consumer control along the way. So, that's one of the areas that we see opportunities, particularly as it relates to like identifying information or identity.

MATT MARCUS. I have one question we just got, I think we can end on here too, is for Emily just how do you protect the less tech savvy users in these types of situations from people who are trying to drain their wallets, get information they shouldn't have?

EMILY SANDS. Yeah, so, I mean, in the case of agentic, in particular that sounds like, so this comes back to our shared payment token. So, we are actually passing over the tokenized credentials needed to make the transaction for the product on the merchant that you have approved. And nothing beyond that. Full stop. And before the shared payment token, we actually used an approach that's not dissimilar to financial infrastructure wise how we approached human agents. So, like someone here has ordered from DoorDash or Instacart or something today, right? So, if you like ordered from DoorDash, at the time you bought, you provided your credit card information. And then your DoorDash driver, who I'm going to call a human agent, and then we'll talk about AI agent, was issued a single use virtual card to spend on your behalf. So, they didn't see your card credentials. They couldn't go buy whatever they wanted for themselves. They could buy from Starbucks near your location in the next hour for the amount you approved. And neither the human agent nor the Starbucks ever saw your card credentials. And actually our early versions of agentic commerce, before we had developed the shared payment token, used that same Stripe issuing product, single use virtual cards, to accomplish the same thing.

And so I think economic infrastructure has come a long way. But it hasn't come a long way overnight. The first version of agentic commerce was actually made possible by infrastructure that we had built for human agents like these delivery drivers so that they could operate on your behalf. And the only thing that's changing is you swap in the human agent for now an AI agent. But the protection mechanisms are actually quite similar.

RICHARD WIDMANN. I think the other thing that I'll just maybe say here about consumer safety is there's something in crypto that we talk about which is building in public. And the benefits of building in public, right? This is something brought up and bringing it full circle to the DeFi panel, right? There are benefits to having these protocols be transparent and

visible and auditable. And so in a lot of ways, I think the idea is that for the consumers who are savvy and they want to unpack that protocol, they can do so. But for the folks who are building applications where they have the touchpoint to the customer, there's an ability for them to be transparent to their end user if they need to, and also create that level of trust between the consumer, the application, and the underlying infrastructure, or the guts. And so you have to do this balancing act of making the infrastructure invisible, right? People don't want, need to know how the roads work, or how they were built, in order to drive on them. That would be a painful process. But you also want to make sure that there's confidence in the safety of that infrastructure that they're passing on, say, for example, a bridge. And so in many ways I think the idea that we're trying to find is with our service providers and partners, the right level of balance between giving users access to transparency but also ensuring that they have the right controls and safeguards visible and apparent to them whenever they're using the application.

MATT MARCUS. Well, I think we're good to wrap up there, time wise. So, thank you, again. Thank you to the Fed. Thank you.