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TRANSCRIPT

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JPMORGAN CHASE & CO.

MANAGEMENT DISCUSSION SECTION

Ebrahim H. Poonawala

Analyst, BofA Securities, Inc.

Good afternoon and welcome back. I'm excited to introduce our next speaker, Takis Georgakopoulos, Global Head of J.P. Morgan Payments. Takis, thank you so much for joining us.

Takis Georgakopoulos

Global Head-Wholesale Payments, JPMorgan Chase & Co.

Thank you for having me.

QUESTION AND ANSWER SECTION

Ebrahim H. Poonawala

Analyst, BofA Securities, Inc.

Yeah. And I was – as I was just telling Takis before we went live, I was like, all the exciting things at the bank recently have happened in Takis' world. So, could not be more excited to have him join us.

And maybe Takis, just to kick it off, I think it was in 2019 when J.P. Morgan actually combined Chase Merchant Services and Professional Services division. You were the first person to sort of lead that combined entity which is now called J.P. Morgan Payments. Just talk to us about the thought process, if you can go back two years or three years around the benefits of that decision and how has that played out over the last couple of years?

Takis Georgakopoulos

Global Head-Wholesale Payments, JPMorgan Chase & Co.

Yeah. I would say we've learned so much over the last two to three years in ways that make us kind of reconfirm the decision, but not necessarily for the reasons for which we started. So, the reasons for which we started is because we were looking at two things, right? We were looking at our large tech companies, in particular, or large marketplaces that we cover on the acquiring side and we were covering those same clients on the treasury side, and we felt that there had to be a synergy in terms of bringing those product capabilities and those value propositions in front of the client in a more consistent way. That was kind of thesis number one.

Thesis number two was that when you look at the underlying technology, there are a lot of things that look pretty similar. So, when you think about alternative methods of payments and wallets, you need to create them on the pay-in side, you need to pay them on the pay-out side. When you think about connecting with PayPal or a Square, you need to do it on the pay-in side, and do it on the pay-out side. You need – you think about the wallet infrastructure for, let's say, marketplaces, you need to be able to accept money, you need to be able to pay that money out. So, we felt that bringing those from a technology standpoint would also be beneficial.

So, I would say that's kind of how we started and all of that has played out more or less as we expected, but on top of that, what we saw over the past couple of years is the convergence of what historically was called acquiring treasury services into really marketplace services and solutions, in a way that I think puts us in a unique position to compete, because, for our large clients and our marketplaces and our emerging market places, the historical thing that this is what a bank does is what a fintech now seem more and more archaic and parochial and kind of useless, what they are looking for is how do I accept and how do I make payments, how do I store value across multiple different asset classes in many parts of the world? How do I do the FX? How do I do remittances, et cetera, et cetera?

So, all of that is basically a set of microservices and the old distinctions, as I said, matter less and less and we talk a little bit more about how we are approaching marketplaces because that's one of our most exciting areas or how we are approaching connected cars, and why we did Volkswagen Pay, and all of that stuff ties into that convergence of what historically was called pay-in and pay-out.

Ebrahim H. Poonawala

Analyst, BofA Securities, Inc.

Got it.

Takis Georgakopoulos

Global Head-Wholesale Payments, JPMorgan Chase & Co.

And it created, you know, a lot of complexity for us, and that's part of the reason why we dropped the word wholesale from the business. We used to be called Wholesale Payments. We dropped the wholesale because, for myself and for my management team, we spent more and more of our time thinking about the end consumer and the end small business that participate in those ecosystems.

Ebrahim H. Poonawala

Analyst, BofA Securities, Inc.

That was a good call, means I think it was too wordy to have wholesale in there and I was like, every time I look at it, I was like, why is it still only limited to wholesale? So, I guess, as you think about – so, you've talked about a few things there, when you think about the customer segments and the growth outlook for your business, where are the biggest opportunities? Is it the e-commerce, is it the large multinational, is it the middle market? Just give us a – frame that opportunity set for us if you could.

Takis Georgakopoulos

Global Head-Wholesale Payments, JPMorgan Chase & Co.

Yeah. So let me just give an – and I'll give some, like very, very round numbers just to give you a sense of order of magnitude. So these are all rounded to the nearest, you know, whatever...

Ebrahim H. Poonawala

Analyst, BofA Securities, Inc.

Sure.

Takis Georgakopoulos

Global Head-Wholesale Payments, JPMorgan Chase & Co.

...billion or whatever number. So, think of my business as a \$10-billion across all of JPMorgan, between large clients, mid-sized clients, small businesses and every segment in between and those revenues are booked into where the client ownership lies in the Corporate & Investment bank or in the Commercial bank or in the Retail bank. And think of the revenue streams for the business as approximately 50% liquidity NII and then 50% fees. So that's kind of the bank now.

In terms of segments, there are four segments. There is the FIG book and you know, historically JPMorgan was always the bank of banks. It's a significant portion of our business. It's a highly profitable portion of our business and while the underlying market is not growing, we continue to gain market share in that segment. So our SWIFT market share, which I would say is probably the best proxy for that business, went from 19% when I started in 2016, to 24% last year, and we see absolutely no reason why that number should not continue to move upwards to a number closer to 30%. There will be natural limits, but I don't think we're anywhere close to that limit.

So, in a world where that overall market remains more or less flat, we think we are going to have, let's call it, a 5% growth rate above and beyond whatever the market does. Why do we grow? We grow because we have the broadest network, the broadest correspondent banking network, which means that for any bank, especially the most complicated parts of the world who have J.P. Morgan as their correspondent, one, connects them to the whole world, and then two, is a stamp of approval that from an AML and KYC perspective, we got comfortable with the controls and the processes that this bank has.

At the same time, the way we tried to add value to that network, is through what we are doing with Onyx. That's why in my recent reorganization, Umar Farooq who runs FIG has both the traditional banking business, as well as Onyx under his purview, because the primary use case of Onyx is to eliminate inefficiencies within correspondent banking. And I don't want to bore people with correspondent banking, but it's a very long chain of hops between the originator and the beneficiary, especially if the beneficiary or the originator is in more difficult countries in the world, where you need to go to a money center first before you go to, you know, wherever the destination is.

So if you think of someone wanting to send money from, I don't know, Taiwan to Indonesia, or from the Middle East to the US and so on, typically, there are three or four hops I'll have to go through, and what we are trying to do with Onyx and through our Liink Network is we can

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Global Head-Wholesale Payments, JPMorgan Chase & Co.

say that money can go through SWIFT, but the information exchange and the information validation can happen instantaneously through an API, through Liink. And that's kind of one example of how we are trying to simplify things and create value for the banks, and create a new revenue stream for ourselves.

So that's segment number one, FIG. Segment number two, corporates, the big competitor there I would say is Citi globally, and then different banks in different parts of the world, HSBC, Standard Chartered in Asia, Deutsche in the US – in sorry, Europe, BNP, in Europe, or in Latin America and so on and so forth. Our goals are there always to close the gap that we have to Citi. Citi started that business decades before we did with a big customer base and local acquisitions, et cetera. We identified a \$2-billion gap to Citi of which we think one is addressable based on our presence and our risk appetite, and we've been kind of trying to gain market share year-after-year, in what is as you know, a very slow-moving business.

So, the good news is, we're making progress. Our market share in 2016 for Coalition used to be 4.8%. We think this year it's going to be north of 7%. So we are making progress. It's going to take a while; significant upside.

The way we are approaching the market though is not through a check list. I saw that when I started in this business, my colleagues said the check list is what Citi does, is what we do, check excess and that kind of drove our investments. This is not kind of the right way to approach the market and we moved very quickly from thinking about individual capabilities to thinking about value-added services and data and analytics and APIs and everything else, and I think the last incarnation of how we are thinking about things now is industry-aligned ecosystems.

The way to add value to a corporate client is not to go tell them, hey, I can do a wire. Everyone can. It's not even to go and tell them, I have APIs and like I laugh when I see some of my competitors say I have like 50 APIs. Great. But really that does not matter that much. What matters is, if you talk to a healthcare company, can you solve their pain point? What is their pain point? Pain point is in US healthcare is all of the paper trail between the doctor, the hospital, the healthcare provider, the government and so on and so forth. And that's why we bought InstaMed because InstaMed had that network of about 50% of the healthcare professionals in the US, and they had a solution to digitize all of that information exchange. And then all we had to do is add payments on the back of that.

When you think about what we're doing with Volkswagen Pay, and granted this is a much more nascent industry, is we believe cars are going to become kind of intelligent machines that will be able to exchange value over time, or enable the exchange of value between the driver and the car, and all of the places that the car interacts with, from, you know, charging stations to gas stations, to ordering heated seats, to ordering whatever internet radio. So, all of that will require an interface between the driver and the car, and this is what Volkswagen Pay has done. They've done it for Volkswagen, creating an app that allows you to interact with your car, order things for your car and order things related to your car, and then once again, what we are going to do is embed payments on the back of that.

So, these are kind of two examples and we are going industry vertical by industry vertical to say, what is the pain point and what is the end-toend solution that we need to create, whether it is on our own, whether it is through an acquisition, whether it is through a partner that will address that pain point. I think the third example and then I will stop, is supply chain finance, which is an issue for a lot of our clients, including some of our large corporates and that's why we created the deal with Taulia because we wanted to be able to efficiently support supply chain finance and all of the smaller suppliers.

So, taking a step back, a big segment for us, continue the gap to number one in that segment and the growth rate on the fee side we believe is around 10% and then on the liquidity side, it depends on the interest rate environment and I'm going to come back to that.

And then the fourth – third and fourth segment are the two that I'm most proud of and I'm going to lump them together, it is e-commerce and SMB. Together, these two segments represent maybe 15% of the overall business, a lot of it on the acquiring side and some of it on the payment side, and this is where the value of putting J.P. Morgan Payments together really came. To give you two stats, we do 50% of e-commerce payments – e-commerce acquiring in the US today and that market share really has not shifted over the last four years. So, even though you hear and you read them, I do the same about Square and Stripe and PayPal, and Adyen, and all of these guys, our market share is really not much and it remains at numbers like 50%-plus, and we continue to run 4,000 payments per second for some of the largest, you know, West Coast companies.

The second stat is how that translates now into the payment side of the business. And five years ago, when I started in 2016, we were doing payments for one of the global top ten companies – tech companies. Today, we do payments for eight of the top ten and what's been the biggest delta, the biggest delta is what I said from the beginning, that we are able to go to them with one solution and interact with them as they would expect from a tech company.



Global Head-Wholesale Payments, JPMorgan Chase & Co.

So, point one of the conversation is our APIs. It's, you know, the five-line APIs, not like the whole spreadsheet APIs, and it is the ability through a single API to do pay-ins, accept the payments, store those payments into consumer, seller, app developer or whatever else the marketplace does, wallets, and then do the pay-out in an efficient way, not just in the easy part of the world, but also in the more complex parts of the world like, you know, places like China. And we have unique solutions in all of that space.

So, there, I would expect our growth rates to be well north of 20%. Keep in mind that a lot of the revenues there are predominantly fees, so the liquidity issues are a little bit less relevant here and the growth rate will partly reflect the growth rate of the underlying company we do business with, but a lot of it will also reflect the market share gains that we have in that market.

So, so to just like summarize the whole thing, if you think about liquidity and fees as 50-50, on the fee side, we expect to continue growing at a 10% rate and then on the liquidity side, you know, who knows what's going to happen to rates, but let's just say there is no downside from where we are and each rate rise will meaningfully add to our economics going forward.

Ebrahim H. Poonawala

Analyst, BofA Securities, Inc.

Got it. That's helpful. Thanks for going through that rundown. I guess, just taking a step back, I think when you talk to industry participants, none of them know as much as you, I'll say that, but when you – when you have this conversation, it feels like payments is going to be the epicenter of client engagement. And when we look at the P2P side, it feels like a lot of the non-banks have taken market share. One, if you don't mind, draw the parallel for us around B2B versus P2P. Are the inherent advantages that banks have on the B2B wholesale payments side that make them the natural winner, understanding that they need to execute, and just how you see that as evolving and the role the Big Tech or non-banks will play, if any?

Takis Georgakopoulos

Global Head-Wholesale Payments, JPMorgan Chase & Co.

Sure. A great question, and it's even a question that we grapple with every day because as you can imagine, I also spend a lot of time with my Chase colleagues thinking about the P2P space and the connectivity between what we do on this side of the business, and obviously the huge network and the huge scale that Chase has. So, if you think about payments in kind of three categories, category one is large B2B payments. You want to do business with Amazon, you want to do business with GE, what they want is they want scale and they want safety, right, and they want kind of a proven track record that we know how to do that stuff.

We move \$9.5 trillion every day. We do that with Seven Sigma accuracy. I do not believe there is any fintech that gets anywhere close to like within three zeros of those numbers.

So, I think that is what we do, that's our bread-and-butter, it's obviously a lower margin business, but it's a business that fintechs neither can do, nor I believe have any particular interest in doing. They do get into niche solutions, let's say payroll, invoicing solutions, better front end, right, so they go with specific solutions, but if you think about the core money movement, they are not there.

On the other end of the spectrum, and then I'll go to the middle, on the other end of the spectrum, you have P2P payments and there what you had is not just in the US but around the world, for whatever reason, the customer experience that banks gave you when you wanted to move money from person A to person B, was just not great and then you get PayPal and Venmo in the US, and then you get WeChat and Ant Financial in China, and you know, all of these guys can transfer wires in Europe, and suddenly they use banks on the back end, and we bank – my business, we do bank a lot of these guys, but then you look at the customer experience, you look at the apps that they created and the customer experience is really day and night. And I think that's why they want, that's why they generated all of these great growth rates.

Now, what they've done is not rocket science and what you see and you will see even more is banks trying to compete with that and trying to do it in a way that maintains the safety and controls of the bank and the scale of the bank, by trying to replicate the customer experience that these guys have created. But it's fair to say that they do have a head start, not just on the consumer side, but also the small business side. I was reading something that Stripe was writing about their embedded banking and they said, a typical bank takes 14 days to open an account. That's not completely fair, but there is an element of truth there, which is the customer experience that banks created both for consumers and for small businesses was paper based, branch based, face-to-face based, and then the combination of e-commerce and COVID made all of that just less interesting for a lot of people.

So, banks are trying to catch up, but fintechs I think have an interesting start. The part in the middle, which for me is quite interesting, is where those two things come together, which is when you think about e-commerce and marketplaces, because in each marketplace you have consumers and small businesses interact with each other, together with a big marketplace – a big company that manages the marketplace.

Global Head-Wholesale Payments, JPMorgan Chase & Co.

That is guite interesting because it brings together all of the capabilities that we can have, we can help the marketplace operate better, but then we can take the individual small businesses, onboard them, KYC them, offer them the ability to accept money, offer them bank accounts and offer them the ability to get paid out in the currency, and the country and the payment method that they want.

This is called embedded banking. Stripe announced it, but they have not gone live. We have not announced it, but we are ready to go live by the end of this year, with I believe, a customer experience that's unique and a value proposition that's really embedded in the marketplace.

We are not trying to create a bank account to compete with Chase or Wells Fargo or anyone else. We are trying to create a bank account for the small business that operates within a marketplace within that ecosystem embedded within the ecosystem in the value added that the marketplace has, co-branded with our ecosystem, but with the cost structure and the customer experience, which I would say is at least as good as the best fintech, if not better, and will go from design to live in nine months.

Ebrahim H. Poonawala

Analyst, BofA Securities, Inc.

Got it. And just sticking to that in terms of the full notion of embedded finance for banking, when you think about as a bank or as an institution trying to embed yourself in that customer journey or the - what do you need to do? What's the biggest hurdle there? Is it just creative thinking in terms of strategically being ahead of the curve on where you need to go? Do you need more partnerships with retailers, e-commerce providers, et cetera? Like, what are the two or three things that you really need to get yourself embedded within that space?

Takis Georgakopoulos

Global Head-Wholesale Payments, JPMorgan Chase & Co.

As I said, so, on the embedded side, we are going live kind of in the next couple of months. So I don't feel like we need much - and because we have 50% of e-commerce payments, we actually do have all of these clients, all of them are institutional clients from J.P. Morgan. I think the biggest thing that we had to grapple with and decide is what is our approach to the market because we have multiple different approaches. They all come with different economics. We have a little bit of a barbell strategy, which is, if you are a small business, you can go to Chase and you can open an account, or if you operate in a bigger marketplace, let's call it the Amazons or Alibabas of the world, Amazon and Alibaba do all of that work. So, essentially, Amazon is our institutional client or any one of those marketplaces are our institutional clients, but we don't touch the underlying merchants participating there.

I think the extension that we create is for other marketplaces that want to stay out of the money flow to be able to combine both of those things into one value proposition. So, I believe that by next year, we will be able to offer the full spectrum of solutions to any marketplace starting from the US and then expanding into Europe and then other parts of the world. And yes, you do need partnerships because when you talk to the big marketplaces, yes, they care about the US, they care about Europe, but they also care about Africa and Bangladesh and Latin America. And obviously, there is a limit to how much we can move. So having the right partners is part of the answer.

Ebrahim H. Poonawala

Analyst, BofA Securities, Inc.

Got it. And I guess, the other aspect that you're dealing to when I'm talking to the banks is just around the regulatory infrastructure, right? So, you mentioned about having the core capabilities around the risk framework, some of the - is it big tech, some of the retailers are not adhering or abiding by the same kind of set of rules. One, is having that added layer of sort of a regulatory framework that you need to comply with? Is that a real hurdle? And how do you kind of cross - sort of get around the fact in terms of competing and leveling the playing field versus big tech or retail when it comes to that?

Takis Georgakopoulos

Global Head-Wholesale Payments, JPMorgan Chase & Co.

Yeah. So, again, my Chase colleagues may have a slightly different answer for that. From our vantage point, first of all, it's not optional, right? We operate in a regulatory environment that we do in every country around the world. Regulators have a certain set of expectations from us, which a little bit raises the bar of how well we do things when we do that. So, if you think about Onyx and if you want, we can talk about Onyx, other companies have been talking about like crypto and stablecoins and all of that stuff for years and re-branding things, but nothing has gone live. We move with a JPM Coin \$1 billion every day. And the JPM Coin we explain to our regulators that it is a deposit on a distributed ledger. We got them comfortable with what we are doing and it is live and it moves money.





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Global Head-Wholesale Payments, JPMorgan Chase & Co.

Now the difference is we have to engage with regulators early. We need to limit our use cases to things that we are comfortable with. And then, as we get comfortable, regulators get comfortable, we can expand the use cases. We would never start from like doing retail, whichever part of the world we are not doing business today. So, we need to be careful with use cases, but we have the scale and we have the investment capabilities to be able to do both of those things. So, I see as an added cost and I see as a reason to be more serious about how we do things, but it has not slowed us down partly because of the scale and the reach and the existing business that we have.

Ebrahim H. Poonawala

Analyst, BofA Securities, Inc.

Got it. And maybe it's a good segue to just spend some time on Onyx. Just talk to us in terms of what's the end state? Like, I think there's this concept of a shared utility. I think Goldman executed a trade on Onyx a few months ago. Just give us a perspective of what we are trying to achieve, what success looks like as far as Onyx is concerned?

Takis Georgakopoulos

Global Head-Wholesale Payments, JPMorgan Chase & Co.



Yeah. So, Onyx started as R&D, it started as trying things out and see what happens in the blockchain world, in the crypto or stable currency world, in the smart contract world. So, anything that was outside of our regular business but had the potential to disrupt our business went into Onyx. We stopped calling it R&D when it crossed \$1 billion of payments a day because that's a lot. And also when we went live Partior in Singapore. But think of Onyx as three parts for my business and there is more things that we do on the trading side. But when it comes to payments there are three primary use cases.

One is we have a network. Right now, there's 400 banks. But in principle, it can have corporates, it can have fintechs, it can have anyone, and we will move in that direction. That network is just a secure blockchain network in which all of these participants can exchange information. What kind of information? That's up to the apps that work on that network. We've had a couple of ideas, some of them are somewhat geeky because of correspondent banking like sanction screening, but some others address real pain points like, for example, account validation. If you're a large company and you make payments, you have a marketplace, a global marketplace and you need to make payments in the Asian markets or in Mexico or in China, the amount of rejections that you get and the cost of managing those is extremely high. So, what you can do through our linked network is you can verify the information before you send the payment. And that we believe can save millions of dollars for our clients and generate new revenue stream for us.

But once again, each one of these applications will be owned by the banks or the fintechs that come up with the ideas. We're going to keep a sliver for managing the infrastructure, but we won't link to become the network on which innovation happens related to cross-border transactions and cross-border information exchange. So, that's kind of one theme.

The second theme is the JPM Coin and moving value through a distributed ledger. Who knows if CBDCs are going to happen and how they are going to look like, et cetera, but the probability is way more than zero, if for no other reason because China has already done. If you do live in a world in which there are CBDCs and in which CBDCs will allow cross-border transactions, the traditional payments network systems that we have will not work. So, for us to be future proof, we need to have a way in parallel to the existing system that moves our \$9 trillion per day, we need a parallel system that will work in a distributed ledger CBDC world. That's why we launched Partior, that's why we launched the JPM Coin so that we are able to move value on a blockchain in a secure way and prove to the world through what we are doing in Singapore that such a model can work. How much it is going to get above the consensus, I don't really know. But just what we learned from that experiment I think was worth the effort.

And then the third one, again staying with JPM Coin, is we believe the world is moving to a 24/7 money movement environment. We believe payments are going to be embedded into smart machines and into everything that we do. The value of those payments is going to keep on going down because you will need to do microtransactions. I mentioned the car as an example, your fridge is another example, and my team has a variety of esoteric examples, which I'm not going to go through, but the point is 24/7 micropayments need to happen in an efficient network at zero cost. Credit cards is not the way to do that. So, we need a new way to think about micropayments and coins are at least one of those approaches. And that's another reason why we're making pilots with the JPM Coin in corporate settings, but also with the programmability of those coins, which means that the good thing about programmable money is opposed to like cash is that you can embed code on how that coin will behave into the coin itself, which means decisions can be automated and be done in microseconds as opposed to someone needing to press a button or put a credit card or press checkout or whatever else things we do today. So, again, a little bit futuristic, but real use cases, real value, real ideas there.

Ebrahim H. Poonawala

Analyst, BofA Securities, Inc.

Got it. Helpful. I know we've about 10 minutes, so there are a couple of topics I wanted to hit. One was just around talent retention clearly one coming out of the pandemic, the job market has been nothing like we've seen I think over the last 10 years. But even outside of that, just talk to us about how easy, especially for what you're doing in terms of attracting talent to the bank. I like to say like banks are not kind of a natural place for a technologist to come and kind of flourish just because of the bureaucracy, the regulatory sort of strings attached. Give us a perspective in terms of the ability to hire talent and why you - I mean, I was looking at your bio and you have like a Ph.D. in mathematics, and I was like why is this guy here? So, give us a sense of what drives you and how you attract talent?

Takis Georgakopoulos

Global Head-Wholesale Payments, JPMorgan Chase & Co.

It's not easy and part of the reason why I like this business is because it's really a technology business. And one of the things that was a journey for us to change is how technology is perceived within payments. In traditional banks, as you know, there are the bankers at the top they talk to clients. Then there is product people that do a bunch of stuff and then there's people that no one ever sees that go and code. If that's your model, you can never attract and hire talent. And part of the reason why we reorganized the business is so that product and engineering are really one and a product manager cannot be successful unless they understand what we are building and what our technology infrastructure looks like. And similarly, our technologists cannot be successful unless they understand the product and who we are building it for. And so, if you think about some of our more successful examples of new product development like embedded finance that we mentioned, the guy who runs that comes from an engineering background and has an end-to-end team of product, engineering, design, data and analytics, all of that one team all organized under that one person.

To answer your question hiring people from a technology background especially pre-COVID was not that hard. We had two advantages, right? One advantage is the huge scale of what we do. I have an infinite amount of trust for the talent in the big tech companies on the West Coast, like Google, like Apple, Facebook, extremely, extremely talented engineers, a lot of them over time ending up working on very small issues. They come here and I tell them about the quadrillions of dollars that we move every year in every country around the world. I tell them about the journey that we are making from the mainframe infrastructure to basically clouds, cloud-first, cloud-enabled, and cloud-native infrastructure and helping us make that transition together with the appetite from the top of the house from Jamie down to invest in that business. And suddenly, you have a lot of people that are very interested to come in.

So, we have a lot of success getting people from the PayPals of the world and the Adyens of the world and Google and Amazon, et cetera, et cetera. And what I am trying to do is we are trying to create an organization that has the right balance between good general managers that can put together high-performing teams, people that understand payments and banking and our regulators, with people that think out of the box and want to push the envelope. And I think that natural tension between those is what drives us forward.

So I felt that all of that worked extremely well. And if you look at the talent that we brought in, especially on the acquiring side, I would say three-quarters of them come not from the banking background, but more from a technology, engineering, data science, AI, ML background. The post-COVID world has made all of that equation much harder. We continue to hire great talent, but we also lose great talent. And some of it is just hard to compete with, right? There are crypto companies that are paying in the crypto that they bring. It's very hard for me to compete with, like, money that someone can bring to their computer, so there is a little bit of that, some of it is a function of the markets that we see around us. Some of it is a function that capabilities like being a good machine learning, a coder and someone who understands AI, it's just there's not a lot of those people. So, we just need to continue hiring aggressively, but also diversify the pool of talent that we get. If the only place we get talent is Palo Alto, like, good luck with that. So, you need to go to places like Salt Lake and you need to think about places like Europe, Buenos Aires, not just Israel by the way in Europe because it's extremely competitive there. So, you need to be creative and think about where else the talent is and just go where the talent is rather than religiously try to hire from the same companies.

Ebrahim H. Poonawala

Analyst, BofA Securities, Inc.

Got it. And you mentioned earlier about the Volkswagen ownership stake, but also like JPMorgan has, obviously, publicly been very involved in fintech acquisitions, be The Infatuation, et cetera. How much of those deals are also tied to just bringing on that talent that the bank can then use elsewhere within? Just talk to us a little bit about that.

Takis Georgakopoulos

Global Head-Wholesale Payments, JPMorgan Chase & Co.

So, when we think about both acquisitions and partnerships, the first question that my boss will ask is not what are the revenues, what's the EBITDA. The first question is how good is their technology, how good is their engineering talent because that for us is the cornerstone and the









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Global Head-Wholesale Payments, JPMorgan Chase & Co.

binding constraint in growing our business. We have an incredibly large book of work in front of us to both make our infrastructure cloud-native as well as to develop all of those value-added services that I talked about and all of those ecosystems that we want to do by industry. We cannot do that on our own. So, whether it is a partnership or whether it is an acquisition, dimension number one is are we getting a great technology platform that can tie into our infrastructure easily and are we getting a great engineering team that can then go on and continue the momentum. That is question number one.

I think, on the contrary, because of where the valuations are, we are generally speaking at least for the payments business, we are wary of paying very high multiples for revenues. We can go and get those revenues if we have the right technology. We're not going to pay for the revenues. We're going to pay for exceptional talent and exceptional infrastructure.

Ebrahim H. Poonawala

Analyst, BofA Securities, Inc.

Got it. And when you look at the pool of potential sort of additional acquisition opportunities, how deep is that? Are things like the Volkswagen opportunities like very rare or are there many of those and we'll see a lot more over the next year or so?

Takis Georgakopoulos

Global Head-Wholesale Payments, JPMorgan Chase & Co.

They are rare and they are difficult. They are rare partly because of where the valuations are, but also they are rare because if you buy a platform, especially if you buy a fintech, you talked about the different regulatory environment, right? A fintech can survive the lower cyber walls or standards with lower resiliency standards and so on and so forth. The moment we buy them, they need to be uplifted to where we are. So, think of the amount of distraction that creates for the engineering team rather than going and innovating now they need to go and uplift to whatever JPMorgan is telling them that they need to do. And that's why you will continue seeing us do many fewer acquisitions than partnerships.

That said, there are interesting things so we have a map of the world with everything that every fintech that we know about is doing and the places where we are interested is places where we find ecosystem place or network place, think of the kind of InstaMed example, places where people have taken a different approach from the industry and they built something unique and then places that are complementary to a roadmap and would accelerate ROE. So, given all of that, once again, we would expect to continue to do more, not just in the US. Volkswagen is obviously a global capability, but a lot of those technologies really can be applied worldwide. So I think one of the big changes for us is if you only look for acquisitions here in the US, you tend to pay a premium and it tends to be extremely competitive, when you start looking at other parts of the world, you find niche deals that you've seen some of those from my colleagues on the Chase international side where you get more interesting things and great management things, et cetera. So, we will continue to be looking at both.

Ebrahim H. Poonawala

Analyst, BofA Securities, Inc.

Got it. And one last question. I know we're on top of our time. As you think about the risk to your business and what you're doing, what would be the number one risk where things could go wrong where you would have loss of market share or get out-competed by big tech, fintech, what would it be?

Takis Georgakopoulos

Global Head-Wholesale Payments, JPMorgan Chase & Co.

Yeah. We feel really good about where we are and about the trajectory and I talked a little bit about our market share gains, et cetera. So, we feel pretty good about what we've done and how we are seeing the business evolve. I go back and I would say the biggest risk in our business is given the scale of what we do, cyber, operational risk, single point of failure, whether it is us or whether it is an industry utility, right, any one of those things could really derail our approach. Obviously, we had issues in the past around KYC and AML, we believe all of those are behind us. But once again, customer selection and doing the right business with the right companies is the second thing that could derail us.

The third thing that could derail us is complacency. But frankly, I don't see a lot of risk of that because every time we look at the markets, we see Citi making more money with us on corporates, we see PayPal and IBM growing faster than us. So, everywhere we look, we see big opportunities, big challenges, big competitors. So I don't think that we are going to be complacent, but that would be the third one.





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And obviously, the fourth one is we have really benefited from a consistent strategy year-in, year-out starting from Jamie and Daniel Pinto and the rest of the management team. That is important. These are multi-year transformations that cannot happen in six months. If we change our minds every couple of years we will be nowhere. So, maintaining that consistency is the last thing that I think could derail us – or not maintaining that consistency.

Ebrahim H. Poonawala Analyst, BofA Securities, Inc. All right. This was terrific. So, Takis, thank you so much for taking the time in joining us. Take care. Takis Georgakopoulos Global Head-Wholesale Payments, JPMorgan Chase & Co. Well, I'm going to see you. Thank you. Ebrahim H. Poonawala Analyst, BofA Securities, Inc. Take care.

Takis Georgakopoulos Global Head-Wholesale Payments, JPMorgan Chase & Co.

Bye-bye.

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