Q4 2021 Earnings Call

Company Participants

- Michael Miebach, Chief Executive Officer
- Sachin Mehra, Chief Financial Officer
- Warren Kneeshaw, Head of Investor Relations

Other Participants

- Andrew Jeffrey
- Bryan Keane
- Dan Dolev
- Darrin Peller
- David Koning
- David Togut
- Georgios Mihalos
- Harshita Rawat
- James Friedman
- Jason Kupferberg
- Lisa Ellis
- Moshe Orenbuch
- Ramsey El-Assal
- Rayna Kumar
- Sanjay Sakhrani
- Tien-Tsin Huang

Presentation

Operator

Good day, and thank you for standing by. Welcome to the Fourth Quarter 2021 and Full-Year MasterCard Earnings Conference Call. At this time, all participants are in a listen-only mode. After the speaker presentation, there will be a question-and-answer session. (Operator Instructions) Please be advised that today's conference is being recorded. (Operator Instructions)

I would now like to hand the conference over to your speaker today, Mr.Warren Kneeshaw, Head of Investor Relations. Please go ahead.

Warren Kneeshaw {BIO 16549173 <GO>}

Thank you, Dermira. Good morning, everyone, and thank you for joining us for our fourth quarter 2021 earnings call. With me today are Michael Miebach, our Chief Executive Officer; and Sachin Mehra, our Chief Financial Officer. Following comments from Michael and Sachin, the operator will announce your opportunity to get into the queue for the Q&A session. It is only then that the queue will open for questions. You can access our earnings release, supplemental performance data and the slide deck that accompany this call in the Investor Relations section of our website, mastercard.com. Additionally, the release was furnished with the SEC earlier this morning.

Our comments today regarding our financial results will be on a non-GAAP currency-neutral basis, unless otherwise noted. Both the release and the slide deck include reconciliations of non-GAAP measures to GAAP reported amounts.

Finally, as set forth in more detail in our earnings release, I would like to remind everyone that today's call will include forward-looking statements regarding Mastercard's future performance. Actual performance could differ materially from these forward-looking statements. Information about the factors that could affect future performance are summarized at the end of our earnings release and in our recent SEC filings. A replay of this call will be posted on our website for 30 days.

With that, I will now turn the call over to our Chief Executive Officer, Michael Miebach.

Michael Miebach {BIO 16087573 <GO>}

Thank you, Warren. Good morning, everyone from New York. I'm starting off with the key highlight for the quarter. We delivered strong revenue and earnings growth as we saw further improvement in our underlying operating metrics. Quarter 4 net revenues were up 28% and EPS up 46% versus a year ago on a non-GAAP currency-neutral basis. On the same basis, quarter 4 net revenues are 19% above pre-COVID levels in 2019.

So with that, let's take a look at the macroeconomic front. The outlook remains positive despite the recent supply chain constraints, geopolitical uncertainties and inflationary pressures. Although, there has been a recent surge in COVID cases, there are signs that these may be peaking. While each of these areas merit monitoring, underlying spending trends remain strong as consumers, businesses, and governments have become more adaptable to a changing environment.

In the U.S., economic growth remains solid with low unemployment and healthy consumer confidence. According to our quarter 4 SpendingPulse report, which is always based on all payment types including cash and check, U.S. retail sales, ex auto, ex gas were up 6.4% versus a year ago and up 10.9% versus 2019.

In Europe, GDP growth has been strong, although recently impacted by mobility restrictions. As the impact of the Omicron variant reduces, we expect the economic growth to pick up in the coming quarters, in large part, thanks to considerable pent-up demand from the past year. SpendingPulse shows that overall European retail sales in quarter 4 were up 3.3% versus a year ago and up 1.3% versus 2019.

In Asia-Pacific, vaccination rates continue to improve and we expect economic recovery to pick up pace as both governments and businesses ramp up investment. The travel recovery in Asia-Pacific has lagged that of the rest of the world and has significant growth potential.

The growth in Latin America is expected to moderate a bit following the rebound in 2021. As it relates to COVID specifically, there are early signs that the Omicron spread will be relatively short-lived. The reality is that the tools we have to deal with the pandemic are more advanced than ever. 60% of the world's population is now at least partially vaccinated, effective therapeutics are becoming available, and governments are using more targeted measures to limit the spread. More borders have opened and have stayed open, despite the recent variant. Although, we've always set the path forward will not be linear, there are signs we are moving toward the endemic phase of the disease.

Looking at Mastercard spending trends. Switch volume growth continued to improve quarter-over-quarter. Both consumer credit and debit continue to grow well.

Turning to cross-border. The recovery has continued with overall quarter 4 cross-border levels now higher than those in 2019. Cross-border travel continued to show improvement relative to quarter 3 levels aided by border openings in the U.S., UK, and Canada. While Omicron has had some recent impact on cross-border travel, we continue to believe that the cross-border travel will return to 2019 levels by the end of this year. Cross-border card-not-present spending ex-travel continues to hold up well in the quarter. So overall, the spending trends are moving in the right direction with some near-term travel-related headwinds as a result of the variant.

Now turning to our business highlights. As outlined at our investment community meeting in November, we remain focused on our growth, diversified build strategy and our three strategic priorities, which are expanding in payments, extending our services and embracing new networks. Here's an update on how we're progressing against each of those priorities. First, we're expanding in payments, growing person to merchant payments, scaling across other payment flows and leaning into innovation in new payment technologies.

In aggregate, these targeted flows represent $115 trillion in opportunity. First up, we're driving growth in person to merchant payments through new wins across the globe. In the U.S., I'm excited to announce that we're partnering with Chase and Instacart, a leading online grocery platform in North America on a new Instacart Mastercard co-brand program. This partnership marks an additional co-brand win with Chase, quickly following the recent launch of the Chase Aeroplan World Elite Mastercard.

In addition, with First Interstate Bank's planned acquisition of Great Western Bank, we will flip Great Western's consumer debit, credit and commercial portfolios to MasterCard. And I'm happy to note that the consumer credit portfolio of Merrick's Bank, over 3 million customers will transition to Mastercard beginning in the second quarter. Merrick Bank plans to leverage several Mastercard solutions, including our fraud prevention, consulting, open banking and loyalty services.

Over in the Netherlands, we've renewed our partnership with Rabobank, which includes the migration of 8 million Maestro cards to debit Mastercard. We signed an exclusive deal with Westpac in Australia for the new Banking-as-a-Service platform. This platform will allow new players to leverage Westpac's banking capabilities. Afterpay, the first partner on the platform will connect debit Mastercards to their money by Afterpay app. And in the U.K., the Net West debit migration is progressing to plan, is in the early stages of consumer rollout.

We're also expanding in payments by capturing new payment flows, including commercial, (inaudible) B2B accounts payable, bill pay and cross-border remittances. For example, in the commerce space, we've expanded our relationship with Bank of America, where we'll be the lead brand for new commercial card issuance. We've also renewed and expanded our relationship with WEX, including being chosen as their strategic partner, and adding open-loop functionality to their millions of closed-loop fleet cards. Turning to accounts payable, we continue to scale Mastercard tracks, WEX, BMO, BOK Financial, (inaudible) will connect to the platform.

We also launched the launch -- we also announced the launch of Mastercard Track Instant Pay, which uses machine learning to analyze and initiate automatic virtual card payments, streamlining processes for buyers and improving cash flow for suppliers. And we're driving new B2B acceptance through a global partnership with Boost Payment Solutions with an initial focus on expanding the use of commercial card in seven key markets. We're addressing new payment flows and consumer bill payments as well. We recently announced the acquisition of Arcus to help deliver bill pay solutions and other real-time payment applications in Latin America.

Arcus enables digital payments for the majority of households built in Mexico and its connections with banks, fintechs and digital wall providers across the region. And finally, we continue to capture new flows and cross-border remittances. This quarter, we established a partnership with Travelex in Brazil, who will use Mastercard's cross-border services, send P2P transfers to the U.S. and Europe.

For domestic disbursements in the U.S., we partnered with fintech processor, TabaPay, to make Mastercard Send easily available to fintechs and merchants across multiple use cases. Now shifting gear. We're also expanding in payments by leaning into payment innovation in areas like installments, contactless acceptance and crypto currencies. Here are a few examples.

Our open-loop Mastercard installment program that we announced last quarter has been very well received. The U.S. launch is on schedule for quarter 1. We're actively bringing new partners into the program as we announced in the Middle East, Africa earlier this week, watch this space.

Now we're making great progress in expanding contactless acceptance by turning the world's billions of active smartphones into potential acceptance devices, enabling people to buy and sell whenever, wherever they want. We now have 100 deployments of Tap on Phone in over 50 markets with leading partners globally. Contactless penetration increased to one and two of our in-person switch transactions globally this quarter. This is up from approximately one and three prior to the pandemic. And with that, the potential for accelerated acceptance growth, financial inclusion and consumer convenience is substantial.

We're also bringing capabilities to experience and reach to help enable the crypto ecosystem. Our new collaboration with Coinbase will allow consumers to use their Mastercard to purchase NFTs, try that myself. Our work with consensus will make it easier for software developers to increase the scale, efficiency and speed of transactions on Ethereum and permissioned blockchains.

And our CDC Sandbox Test Platform, which we launched in 2020, continues to gain traction. We're helping central banks, financial institutions and the fintechs simulate the issuance and distribution of CBDC along with the integration of CBDDs with our card network, our real-time payment modules and native blockchain wallets.

Now shifting to services. Our services support can differentiate our core products and have played a critical role enabling many of them I just mentioned. We grew services revenue at 25% in 2021 on a currency-neutral basis. We will continue to extend our service capabilities to enhance the value of payments. We even further accelerating our growth by expanding into new areas and new use cases, particularly through our data and services and safe cyber intelligence propositions, again, a few examples for you. In December, we announced an agreement to acquire Dynamic Yield from McDonald's.

Dynamic Yield uses enhanced AI to deliver customized product recommendations, offers and content to consumers. Their customer set includes over 400 global brands ranging from financial services companies like Synchrony to retailers like Lens End. When combined with SessionM's loyalty platform and our Test & Learn experimentation software, we will be able to offer a unified consumer engagement and loyalty hub to our customers. McDonald's is a great example of a company who's using all three of these platforms today with plans to further scale and integrate Dynamic Yield's capabilities globally.

In addition, our Ethoca platform continues to experience strong traction in preventing unnecessary charge backs, a real pain point. We added new customers in every region in 2021 for Ethoca. Recently, we launched Ethoca Consumer Clarity, which gives consumers detailed information about purchases on their mobile banking app. Solution is live with issuers across the U.S., U.K. and several European markets, including OTP Bank, Central Cooperative Bank and Paybox Bank.

Now, beyond expanding in payments and extending in services, our third strategic priority area is embracing new networks. Specifically, we are leveraging our expertise in payments to build out new networks with the current focus on open banking and digital identity. On the open banking front, we have closed the acquisition of Aiia in November, which brings strong API connectivity to over 2,700 banks across Europe. And combined with Finicity's North America connection, which cover more than 95% of deposit accounts in the U.S. market, Mastercard has an unparalleled footprint in the key open banking regions, upon which we are building solutions to solve a wide range of use cases. One example is in the mortgage verification space, where Finicity has signed deals with several new partners, including loanDepot. And in the digital identity space, we're helping our customers with fast, frictionless identity verification services.

Ethoca has performed strongly over the last quarter, expanding through strategic partnerships with companies such as ZIP and Equifax, as well as growing its global footprint with leading frack providers Tongon and Air Click in Asia Pacific. Combined, open banking and digital identity extend our value before and after the payment transaction. These are large, attractive and growing opportunities, and we are uniquely positioned to be a leader in both.

So in summary, we delivered strong revenue and earnings growth this quarter. The macroeconomic outlook remains positive with a few areas that we're monitoring, and we're executing against our three strategic priorities: spanning and payments, extending our services and embracing new networks. And all that with substantial progress on the product and deal front this quarter.

Now Sachin, over to you and the numbers.

Sachin Mehra {BIO 15311008 <GO>}

Thanks, Michael. So turning to Page 3, which shows our financial performance for the quarter on a currency-neutral basis, excluding special items, and the impact of gains and losses on our equity investments.

Net revenue was up 28%, reflecting the continued execution of our strategy and the ongoing recovery in spending. Acquisitions contributed 3 ppt to this growth. Operating expenses increased 19%, including a 7 ppt increase from acquisitions. Operating income was up 37%, which includes a 1 ppt decrease related to acquisitions. Net income was up 44%, which includes no impact from acquisitions as the impact of acquisitions on our operating income was offset by a one-time acquisition-related tax benefit. EPS was up 46% year-over-year to $2.35, which includes a $0.04 contribution from share repurchases. During the quarter, we repurchased $1.3 billion worth of stock and an additional $528 million through January 24, 2022.

So, let's turn to Page 4 where you can see the operational metrics for the fourth quarter. Worldwide gross dollar volume or GDV increased by 23% year-over-year on a local concurrency basis. We are seeing continued strength in Debit and Credit. U.S. GDV increased by 23% with Debit growth of 15% and Credit growth of 34%. Outside of the U.S., volume increased 23% with Debit growth of 25% and Credit growth of 20%. To put this in perspective, as a percentage of 2019 levels, GDV is at 125%, up 4 points quarter-over-quarter with Credit at 116%, up 5 points sequentially and Debit at 134%, up 3 points sequentially.

Cross border volume was up 53% globally for the quarter with Intra-Europe cross-border volumes up 45%, and other cross border volumes up 63%, reflecting continued improvement in travel-related cross-border and several borders open during the fourth quarter. In the fourth quarter, cross-border volume was 109% of 2019 levels with Intra-Europe at 122% and other cross border volume at 98% of 2019 levels.

Turning to Page 5, switched transactions grew 27% year-over-year in Q4 and were at 132% of 2019 levels. Card present growth continued to improve while Card not present growth rates remain strong. Card present growth was aided in part by increases in contactless penetration in several regions. In addition, card growth was 9%. Globally, there are 3 billion Mastercard and Maestro-branded cards issued.

Now, let's turn to Page 6 for highlights on a few of the revenue line items again described on a currency-neutral basis unless otherwise noted. The increase in net revenue of 28% was primarily driven by domestic and cross-border transaction and volume growth, as well as strong growth in services, partially offset by higher rebates and incentives. As previously mentioned, acquisitions contributed approximately 3 ppt to net revenue growth.

Looking quickly at the individual revenue line items. Domestic Assessments were up 24%, while worldwide GDV grew 23%, Cross-Border Volume Fees increased 61%, while cross-border volumes increased 53%. The 8 ppt difference is primarily due to favorable mix, as higher yielding ex-Intra Europe cross-border volumes grew faster than Intra Europe cross-border volumes this quarter. Transaction Processing Fees were up 28% generally in line with switched transaction growth of 27%. Other revenues were up 30%, including a 9 ppt contribution from acquisitions. The remaining growth was mostly delivered by our Cyber and Intelligence, and Data and Services Solutions.

Finally, rebates and incentives were up 38% in line with our expectations, reflecting the strong growth in volumes and transactions and new and renewed deal activity.

Moving on to Page 7, you can see that on a currency-neutral basis total operating expenses increased 19% including a 7 ppt impact from acquisitions. Excluding acquisition, operating expenses grew 12%, primarily due to increased spending on advertising and marketing, higher personnel cost to support the continued investment in our strategic initiatives and increased data processing costs.

Turning now to Page 8, let's discuss the specific metrics for the first three weeks of January. First, as a point of process, we continue to provide volume and transaction metrics both on a year-over-year and as a percentage of 2019 basis. However, it is important to note that as we turn the calendar and move into 2022, the index versus 2019 metric now looks back three years and therefore includes a compounding improvement relative to the 2021 index metrics. This compounding impact must be taken into consideration when considering the sequential trend from Q4 to January.

So at the highest level, Omicron has had a minimal impact on overall switched volumes and transactions, but has caused some moderation on cross-border travel.

Going through the metrics in turn, starting with switched volumes through the first three weeks of January, we are now at a 149% of 2019 levels, up 13 points versus Q4. This increase is primarily driven by the compounding effect I just referred to. After adjusting for this compounding effect, Switched Volumes are tracking similarly to what we saw in Q4. The underlying trends in Switched Transactions, adjusted for the compounding effect, are generally tracking the trends we are seeing in Switched Volumes.

In terms of cross-border volume growth, as I mentioned earlier, spending levels as a percentage of 2019 in Q4 are now above pre-pandemic levels. The Omicron variant, which hit partly through December impacted the strong cross-border travel momentum we saw in November. That impact has carried over into January. This has been partially offset by an increase in cross-border card-not-present, ex travel. Overall, cross-border volume through the first three weeks of January is now at 116% of 2019 levels, up 7 points versus Q4. In this case, the compounding effect is partially offset by the impact of the Omicron virus on cross-border travel in January.

Turning to Page 9. I want to share our thoughts on the upcoming year. While there is some uncertainty related to Omicron and potential future variants, our overall expectations for 2022 are positive. The macroeconomic outlook is for continued growth and domestic spending levels have held up well despite the recent surge in cases. The recovery in cross-border travel was progressing well prior to Omicron and we expect a recovery in cross-border travel to resume as the surge passes.

As Michael just noted, the tools available to deal with the pandemic have improved with time and although the path forward may not be linear, there are signs we are moving towards the endemic phase of this disease. Many countries have relaxed their border restrictions and we continue to expect cross-border travel to recover to 2019 levels by the end of 2022. Our recent deal wins, travel-oriented portfolios, and diversified set of services, positioned us extremely well to capitalize on these trends.

Turning to our expectations for the full year 2022. Our base case scenario is for net revenues to grow at the high end of a high-teens rate on a currency-neutral basis excluding acquisitions. Acquisitions are forecasted to add about 1 ppt to this growth, while foreign exchange is expected to be a headwind of 1 ppt to 2 ppt for the year, primarily due to the strengthening of the U.S. dollar relative to the euro.

In terms of operating expenses, we continue to carefully manage our spending as we invest in our payments, services and new network priorities to drive short and long-term growth. For the year, we expect operating expenses to grow at the low end of a low double-digit rate on a currency-neutral basis excluding acquisitions and special items. Acquisitions are forecast to add about 4 ppt to 5 ppt to this growth, while foreign exchange is expected to be a tailwind of approximately 1 ppt for the year.

Turning now to the first quarter. Year-over-year net revenue growth is expected to be at the high end of a high-teens rate, again on a currency-neutral basis excluding acquisitions. This reflects some sequential improvement in cross-border travel spending trends within the quarter relative to 2019 as the impact of Omicron starts to recede as the quarter progresses. Acquisitions are forecast to add about 2 ppt to this growth, while foreign exchange is expected to be a headwind of 2 ppt to 3 ppt for the quarter. From an operating expense standpoint, we expect Q1 operating expense growth to be at a high end of high-single-digits rate versus a year ago on a currency-neutral basis, excluding acquisitions and special items. Acquisitions are forecast to add about 6 ppt to this growth, while foreign exchange is expected to be a tailwind of approximately 1 ppt for the quarter. As a reminder, we discretely disclosed the impact of acquisitions for the year-end which they closed and the subsequent year after which time we do not split them out.

For instance, Finicity which closed in November of 2020 is now folded into the base. We are pleased to have closed the acquisitions of both Aiia and Arcus in November and anticipate closing the pending acquisition of Dynamic Yield in the first half of 2022.

Other items to keep in mind. On the other income and expense line, we are at an expense run rate of approximately $115 million per quarter, given the prevailing interest rates and debt levels. This excludes gains and losses on our equity investments, which are excluded from our non-GAAP metrics. And finally, we expect a tax rate of approximately 17% to 18% for the year based on the current geographic mix of our business.

With that as a backdrop and turning now to Slide 10, I would like to update you on our three-year performance objectives for the 2022 to 2024 period that we first introduced in November at our investment community meeting. The bottom line is that there is no change, although, our jumping-off point for earnings is slightly higher due to our Q4 2021 over performance.

As a reminder, these objectives are on a currency-neutral basis, excludes special items, gains and losses on equity investments, and acquisitions closed after 2021. Using 2021 as our base, over the 2022 to 2024 period, we expect to deliver a net revenue compound annual growth rate in the high-teens. This assumes an annual target market volume growth rate of 10% to 11%, cross-border travel returning to 2019 levels by the end of 2022, and growing our services revenues at a 20% plus CAGR.

From an operating margin perspective, we will continue to operate with the philosophy of delivering a minimum annual operating margin of 50%. Having said this, I would like to emphasize that we continue to believe that it is important for us to invest for the long-term growth, while delivering positive operating leverage and we continue to execute [ph] with this philosophy in mind. And finally, we expect to deliver an EPS CAGR in the low 20s range on a currency-neutral basis, excluding the impact of special items, gains and losses on equity investments, and future acquisition.

And with that, I will turn the call back over to Warren.

Warren Kneeshaw {BIO 16549173 <GO>}

Thank you, Sachin. Dermira, we're now ready for the question-and-answer session.

Questions And Answers

Operator

(Question And Answer)

(Operator Instructions) Your first question will come from Rayna Kumar with UBS.

Q - Rayna Kumar {BIO 17409639 <GO>}

Good morning. Thanks for taking my question. So, was cross-border spending now above pre-pandemic levels? Are you anticipating any pent-up demand in travel spend in our financial guidance, particularly as we get to the travel month in summer?

A - Michael Miebach {BIO 16087573 <GO>}

Hi Rayna, this is Michael. Let me kick this off. So as I said in my remarks earlier, we do see pent-up demand, we've seen pent-up demand in the last year and the year before, and it continues, people will want to travel, get out whenever they can, and it has been proven again and again. So there is an assumption there, and we've been pretty vocal about that that we do continue to believe that cross-border travel will return to pre-pandemic levels by the end of the year. Sachin?

A - Sachin Mehra {BIO 15311008 <GO>}

Yeah, I do Michael. You pretty much covered it. So Rayna, the only thing I'd just add is, we just need to go back to 2021 where we saw that when people has the ability to travel, they express their intent of travel. And we do believe that the impact of Omicron is going to be short-lived. And as borders start to relax a little bit more and people get a little bit more comfortable around, people will get out there and express their demand for travel. Back to what Michael was just saying.

A - Michael Miebach {BIO 16087573 <GO>}

In fact, I'm heading to Europe tonight. So, there you go.

Q - Rayna Kumar {BIO 17409639 <GO>}

Great. Thank you.

A - Michael Miebach {BIO 16087573 <GO>}

Thanks.

Operator

Your next question will come from Harshita Rawat with Bernstein.

Q - Harshita Rawat {BIO 18652811 <GO>}

Good morning. Thank you for taking my question. Michael, I want to ask about FedNow. It looks like it will be live with the U.S. in 2023. Domestic RTP system in many countries is used for payments other than consumer to business, but then you have examples like the ones in India with UPI where its used for retail payments. How do you see that playing out with FedNow, and how can you participate in terms of the services enablement for that? Thank you.

A - Michael Miebach {BIO 16087573 <GO>}

Right. Thank you, Harshita. So FedNow, we'll have to see when it actually comes live. But broadly speaking, if we go with our experience in other countries, we believe there is in real-time payments like the real alternative payment solutions. There's demand by governments, there's demand by businesses and consumers, the 20022 standard allows to carry more data. So, there's all sorts of reasons why this might make sense.

To your question on how participation looks like, what we -- Vocalink in 2016, I promise I won't take you back five years now, but that is a conscious decision realizing exactly what I just said. And if we want to play and we have to have those alternatives. If I look at it from a use case perspective, there's some use cases where cards, it's just simply an excellent answer today, its ecosystem drives huge value. And there is yes, there might be alternatives, but we continue to invest in that and focus on that. At the same time, there's a whole range of use cases where real-time payments account-to-account makes a lot more sense than basic ACH or cash, and that's a displacement opportunity that we certainly want to engage in cross-border remittances, bill pay, and the likes.

I think where our participation and our differentiation comes in is, we have tools across the whole gambit of payment solutions, that's our multi-rail strategy. We have advanced this quite significantly over the last couple of years to true multi-rail solutions, not like that we have one and the other in parallel, it's one single solution. If you look at Mastercard Track, that's exactly what it is. You can pay any which way through -- any which way you like through Mastercard Track, but the payment optimization, the security, the pricing, the predictability, the Mastercard good is all the same across all of these options. So I see it as a fundamental opportunity to participate in new flows rather than anything else.

Q - Harshita Rawat {BIO 18652811 <GO>}

Thank you.

Operator

Your next question will from Darrin Peller with Wolfe Research.

Q - Darrin Peller {BIO 16385359 <GO>}

Thanks guys. Michael, when we think about the parts of your business that are outperforming partly because of the pandemic but partly given where we are, just in the acceleration on spending on electronic payments, can you just walk through that in terms of what kind of sustainability you see to the parts of the business that have sustainable upside now, in other words debit volumes now probably bigger than you would have otherwise thought it would be, services and other piece that's probably higher that otherwise could have been, are those sustainable?

And then maybe, remind us of the parts of the business besides just cross-border that can catch up as we see the recovery again? Thanks guys.

A - Michael Miebach {BIO 16087573 <GO>}

All right. Thanks Darrin. So, I'll start that off and then maybe Sachin can I can kick in. So first of all, the secular shift has gotten a real push out of COVID. I mean, we're -- we had to spend online. And when I look at that, I think that is a fundamental structural trend more online commerce, more online banking, more online everything, and what has really come out over the last two years that this is a lasting trend. So every bit of consumer research that we do, market research that we do, people will say, I learnt to like it. So I'm going to continue to do that. So I think that is an accelerated growth opportunity, and it's a big assumption in our three-year long-term guidance that we gave that we continue to believe that the race towards a more digital economy will be a positive driver for us.

So, sustainable growth driver, you see it comes through and how we build out acceptance, 19% acceptance growth, we continue to find pockets and opportunities and flows and segments that are just not penetrated with our solutions yet. And so I see the underlying secular growth, I see a show up in more places, I mean, I use the term I think at the Investor Day, leave no white space. So, that that is why expanding in payments is a pillar one of our strategy.

You pointed to services. Now, services in a world that is more digital that shows up more data, in a more digital world, a lot more people need to be safe in that digital world, so our C&I services, our security service solutions, we basically we can't run fast enough, that has been outperforming, I give you the growth rate for 2021 and services at 25%, that's for sure an elevated growth rate that we continue to see that very, very positive.

On data and analytics, more data, more people will want to do something with the data. Our merchant will understand. Now that they have more, more merchants are entering into the digital space, how do they define customers in easy way, how do they retain customers, that's where Dynamic Yield comes in, a perfect tool to really make more of that. And then, all of that data in the end will fuel the world of open banking, which is part of a whole new network strategy, is essential and of course the need for digital identity solutions, so all of that is sustainable.

The catch-up opportunity, back to your question, is for sure, travel. It is travel -- domestic travel has been leading, leisure travel has been leading, cross-border travel and corporate travel and over different curves over time, there's significant catch-up opportunity for us. So I think those are the headlines.

Q - Darrin Peller {BIO 16385359 <GO>}

Helpful. Thanks guys.

Operator

Your next question will come from Lisa Ellis with MoffettNathanson.

Q - Lisa Ellis {BIO 18884048 <GO>}

Hey. Good morning, guys. I was hoping to ask about net yields. Just looking back pre-pandemic, Mastercard's net yields were steadily increasing about 0.5 basis point or 1 basis point a year, but then over the last two years have dropped first in 2020 then again somewhat over in 2021. Can you just help parse for us a bit how much of the pressure on yields recently is due to cross-border travel weakness versus perhaps competitive pressure or something like that and kind of what gives you confidence in one versus the other? And I guess looking out into 2022, are you now expecting yields to move back the other direction? Thank you.

A - Sachin Mehra {BIO 15311008 <GO>}

Sure Lisa. I'll take that question. So, look, I think the short answer to your question is the vast majority of what you've seen in terms of net yields has been driven by the changing mix of the business over the pandemic, primarily cross-border volumes coming down and the impact of that. As you know, cross-border volumes and revenues are less indexed from a rebates and incentives standpoint. So, you have the impact of that playing through. I would say fundamentally, we've always operated in a competitive environment. We see no change in the level of competition relative to what we've seen over the past few years. So candidly, I would tell you our assumption going into our planning cycles and going into 2022 as well as over our three-year performance objectives has been one of the impact of having minimal net pricing, which is narrowed rebates and incentives.

And we still can't believe that to be the case, that was very much the case a couple of years ago as well. So, the point really is a lot of what you're seeing on the net revenue yield is being driven by the changing mix primarily cross-border. Services continues to do really well and has been accretive to our yield in the past and we expect that given the opportunity and services, that will be the case going forward as well.

Q - Lisa Ellis {BIO 18884048 <GO>}

Terrific. Thank you.

Operator

Your next question will come from Sanjay Sakhrani with KBW.

Q - Sanjay Sakhrani {BIO 7390132 <GO>}

Thanks. Good morning. I have another follow-up question on the cross-border. I guess, when we think about Omicron, I know there's been a small impact, but I'm just curious if there's any learnings from it? Do you feel like the resiliency of the consumer, and obviously, the tools that we have put us in a better position than where we were, maybe when you guys provided your expectations, understanding your expectations haven't changed? And then I'm just curious as we've seen the U.S. in-bound travel improve, where there any learnings from that? Thanks.

A - Michael Miebach {BIO 16087573 <GO>}

All right, Sanjay. I'll kick that off. So, clearly that have been learnings and there have been learning across the whole industry. You may have followed some of the airlines during the earnings season. And this side, this whole thought about that the time period between a surge, a case surge and how bookings are coming back is narrowing. So, the first learning is that consumers just become more adaptable, I said that earlier, it's not just consumer, it's actually businesses, consumers and governments. Now governments have also learned. And governments have learned in terms of how broad-based social distancing measures and quarantine rules, and the likes are. And those are much more targeted these days, as I said more border stayed open, when the U.S. opened in November, surgeons were going on in Europe and I know entry hurdles at this point, I said I'm traveling to Europe, there is no hurdle at all. It just pretty easy to get back.

So I think the combination of vaccination rates going up, learnings and governments and so far makes it a much more benign mix to deal with whatever might be coming there. So that is a significant exemption that we took as we looked at the rest of the year. You also see that yeah, more routes are being opened, more people want to get out whenever they can. So there's the desire and there's the -- their ability to go out I think together make the kind of right package for us and gets us pretty positive.

A - Sachin Mehra {BIO 15311008 <GO>}

Yeah. And Sanjay, I'll just add to what Michael just said. I think you remember at our November investment community meeting, we had shared with you that the U.S., UK and Canada, in-bound cross-border travel corridors represented in Q3 of 2019, they represented roughly 20% of our total cross-border travel volumes, which we have said and we said that they were tracking at roughly 50% of 2019 levels. These are the -- this is the data we shared with you at the ICM.

Well, just as an update, as we progress through the quarter, in November, we saw these borders open which Michael talked about U.S., UK, Canada. And the same metric, which is the U.S., UK and Canada in Q4 is now at 70% of 2019 level. So, that's just an expression of our confidence about how when people can travel, they will travel.

A - Michael Miebach {BIO 16087573 <GO>}

And I just want to add one more point. So, these are -- some I shared on the macro learnings, Sachin just talked about the upside potential. Now, taking both of that, what we have learned from our customers that are active in the travel space is that everybody is of the same opinion and hence leaning into the travel sector and winning more co-brands, engaging consumers, so that they book with our partners versus somebody else. All that is going on, and you see the whole range of wins, the JetBlue renewal was one of the more recent one, the Aeroplan launched with Chase, IAG last year, et cetera, et cetera. So, there's a lot of learnings by the travel industry themselves on how to engage and really make these co-brands worth -- co-brand programs worthwhile which we like a lot.

Q - Sanjay Sakhrani {BIO 7390132 <GO>}

That's perfect. I had my fingers crossed. Thanks.

A - Michael Miebach {BIO 16087573 <GO>}

Yeah. Very good.

Operator

Your next question come from Tien-Tsin Huang with JPMorgan.

Q - Tien-Tsin Huang {BIO 6065319 <GO>}

Thank you. Good morning, Michael and Sachin. And I wanted to ask about just, well, it looks like your macro view it hasn't changed too much from what you guys talked about at ICM aside from some of the near-term travel headwinds. But just want to check your 1Q outlook here for high-teens revenue growth, when -- it looks like your January trends are above that, nicely above that, any call outs there or is that just conservatism?

A - Michael Miebach {BIO 16087573 <GO>}

So look, I mean, Tien-Tsin just I was thinking, what I've shared with you, in terms of our Q1 thoughts, you've got a factor and that is the headwind which is coming in from the strengthening U.S. dollar, which I kind of talked about what our estimate around that is. So, that would be one kind of corner. But other than that, all we're trying to expressing is, where we're seeing how current metrics and how we're assuming the recovery of Omicron to come through over the course of the first quarter which I kind of shared with you in my prepared remarks. So, really nothing else going on there.

I will emphasize one more time. What you're seeing in terms of the first three weeks of January indexed back 2019 has got a compounding effect and that you have to take into consideration, I think, when you're looking at sequential trends, which is why I was giving you the additional color around what the impact of Omicron was adjusted for the compounding effect on switch volumes, switch transactions and cross-border.

Q - Tien-Tsin Huang {BIO 6065319 <GO>}

Understood. Thank you.

Operator

Your next question will come from David Togut with Evercore ISI.

Q - David Togut {BIO 1496355 <GO>}

Thank you. Good morning. What are your expectations this year for the pace of account-to-account payments rollout in Europe under open banking? And how do you see this affecting credit and debit card growth in Europe? And as a follow-up, would appreciate your perspective on Amazon's very public negotiation with Visa over credit card acceptance at Amazon UK, at whether this reflects more payment options for example, account-to-account or is this a one-off negotiation between two corporates?

A - Michael Miebach {BIO 16087573 <GO>}

All right. Let me start David with that. So account-to-account in Europe, when you look over the last years in Europe, it's been relatively slow placed in terms of consumer adoption and roll out. We have invested -- we're heavily invested across that with Aiia on the open banking side of the account-to-account, with Vocalink, so we're deep in the space. We like -- generally like what we see in terms of direction, take up I think it's I would call it paced. So that's the first thing I would say.

Initiatives like EPI, you look at that and say, their initial focus is actually on the card side and they're thinking account-to-account in the longer run that reflects the same that I just said. So, continued significant opportunity for cards in Europe, but we see the long-term growth opportunity in account-to-account, we kind of covered our bases there. And with our open banking investments at our initial use cases, they're particularly in the UK, I think we can be pretty optimistic about that our partnership with Tesco, with Lloyd's looking very positive.

So your question around Amazon, that's a fundamentally a question for Visa I would say and for Amazon. We have seen these kind of negotiations in the public domain now and then over the years, relatively shortlist and were resolved. These particular news did not involve us at all. We have a strong and long standing relationship with Amazon and we agree that consumer choice matters, that's why we have a multi-rail strategy, and we're going to continue to work with Amazon delivering a whole differentiated set of products. So, nothing particularly to worry about from our perspective.

Q - David Togut {BIO 1496355 <GO>}

Thank you.

Operator

Your next question will come from Bryan Keane with Deutsche Bank.

Q - Bryan Keane {BIO 1889860 <GO>}

Hi guys. Good morning. Just two quick ones for Sachin. Just looking at switch volume on the January month to date in the U.S. at 15%, that's down a little bit from where it was running before. I don't know if that's just an anniversarying of some of the comps. I know the three-year percentage still increased to 139. But just thinking about on the year-over-year basis that 15% anything to call out there.

And then secondly on rebates and incentives, any guidance you can give us for fiscal year '22 as a growth rate or as a percentage of revenue? Thanks.

A - Sachin Mehra {BIO 15311008 <GO>}

Sure Bryan. On the first point, you're referring to the 15% year-over-year growth in the first two weeks of January and you're looking at the sequential trends there. Well, that is the tougher comp issue. And this goes back to the impact of the economic stimulus, which was enabling better spending back on -- in the comparable period last year and that's what you're seeing happened there. So, that's kind of be the answer that first part of the question.

On your second point, look, I mean, the whole rebates and incentives thing, I need to just emphasize one more time. Look, the -- I know people are people are focused on the competitive environment, trust us, we too are, because we operate in that competitive environment and we want to make sure that we compete effectively with our products, capability, services whatever the case might be. We have not seen a meaningful shift in the competitive environment relative to what we've been used to operating in the past. So that's kind of just to level set where we are.

But specifically to your question on rebates and incentives, it's dependent on the timing of deals and how the volume and mix plays out through year. In Q1, we expect rebates and incentives as a percentage of growth to be similar to Q4, that's kind of the extent and all of this is contemplated and what I've shared with you on our full year thoughts as well as on Q1.

Q - Bryan Keane {BIO 1889860 <GO>}

Got it. Thanks so much.

A - Sachin Mehra {BIO 15311008 <GO>}

Sure.

Operator

Your next question will come from Ramsey El-Assal with Barclays.

Q - Ramsey El-Assal {BIO 17528014 <GO>}

Hi, and thanks for taking my question this morning. I wanted to ask about supply chain pressure and whether you're seeing any changes and what that for -- and how much of that might be contemplated in your full year guidance? And separately, I just was wondering if you could help us contextualize your exposure to Russia and what we should expect their sanctions in fact tightened due to political unrest in Ukraine.

A - Michael Miebach {BIO 16087573 <GO>}

All right. Yeah Ramsey, let me start with the supply chain and touch on Russia quickly. Supply chain pressures are clearly there. You're looking at chip shortages. There's also all sorts of things affecting the supply chain. We continue to believe that these are rather short-lived as the supply chain actually balances out. So that's first thing I would say, so there's not a huge assumption in our outlook around that. What we've also seen is, particularly through the holiday season, pretty significant holiday spending, positive season and people spend what they can spend on. So if you can't buy something, you buy something else. So, we've seen shifts in categories. So from that perspective again the pent-up demand is an important aspect here.

On Russia, very early to tell how this is going to play out as a certainty. It was one of the points that I referred to earlier, geopolitical uncertainties that we have to keep in focus. We have seen sanctions applied in previous years, and we basically manage through that.

We'll have to see what it is. Russia is a substantial, an important and strategically important market for us. So, we'll have to see how that plays out.

Q - Ramsey El-Assal {BIO 17528014 <GO>}

All right. Thanks so much.

A - Michael Miebach {BIO 16087573 <GO>}

Thank you.

Operator

Your next question will come from Dan Dolev with Mizuho.

Q - Dan Dolev {BIO 16010277 <GO>}

Hey. Good morning. Thanks for taking my question. There was a question before on overall yields. I want to ask about domestic assessment specifically. If I look at Q4, I think you're running at about 13.1 basis point. Historically, the number was higher, more closer to 14 basis point. Is there anything to call out on that front? Thank you very much.

A - Sachin Mehra {BIO 15311008 <GO>}

Again, look, I mean, on domestic assessment, I think what you've seasonally -- I mean, what you've seen is that typically in Q4, we see the yield of domestic assessments to EV [ph] actually drop off a little bit. That's just what we have historically seen. There's a bunch of moving parts, which are going on in that and really nothing unusual to call our out there, the trajectory of what we've seen historically still holds true on a going-forward basis.

Q - Dan Dolev {BIO 16010277 <GO>}

Got it. Thank you so much.

A - Sachin Mehra {BIO 15311008 <GO>}

Yeah.

Operator

Your next question will come from Moshe Orenbuch with Credit Suisse.

Q - Moshe Orenbuch {BIO 1497419 <GO>}

Great. Thanks. You did discuss the account-to-account side of things a little bit. But I'm just wondering given how often this comes up in discussions with investors. We've seen some issues that some of the domestic players have had from a regulatory standpoint. Any thoughts about how that could affect kind of the evolution of that product advantage is perhaps that being part of Mastercard might be for Tink and Aiia? And other kind of thoughts about just the growth of that both in Europe and the U.S.? Thanks.

A - Michael Miebach {BIO 16087573 <GO>}

All right. Moshe, excellent question. The -- we see there is clearly an interest of regulators in new forms of payment, regulators are always keen on security, on data protection, on consumer protection, that is always in focus. We have most recently seen this with an interest in buy now pay later. UK regulators doing a consultation, various regulators have shown interest to regulate the space.

In account-to-account, you should expect something similar. We do know that from Vocalink and pay by account in the UK, that is very much in focus. And I think it differentiates an established player like us to basically come in, we have very clear data principles, we have -- we don't sell data to anybody, we believe in the consumer -- strong consumer consent, the likes and the likes, and all of that is codified in the MasterCard franchise. So a company that goes beyond just being a fintech and providing a connection and getting money from A to B, but doing it in an organized fashion with very clear rules that people sign up, they partner with us, I think is going to be a differentiator.

A - Sachin Mehra {BIO 15311008 <GO>}

I'll just add to what Michael said, I think if you're going to remember that when we talked about what we were doing in the open banking space. We were very deliberate about how we went about our activities that particularly as it relates to, how we got data from the banks and that was all through APIs is that it has been our philosophy. And the idea being you got to do it in the right way. You cannot do mean scraping. You should be doing it through APIs, it's not only because it's the right thing to do from a safety and security standpoint, but also the data elements you can actually get by virtue of doing it in that manner, help you create a much more sustainable long-term product which you can offer. So, very much part and parcel of what the philosophy has been from the get-go in the space for us.

Q - Moshe Orenbuch {BIO 1497419 <GO>}

Great. Thank you, Michael and Sachin.

A - Michael Miebach {BIO 16087573 <GO>}

Thank you.

Operator

Your next question will come from Dave Koning with Baird.

Q - David Koning {BIO 7310416 <GO>}

Yeah. Hey guys. Thank you. And I noticed us average ticket size, in Q4, I think it was only up 2%, the prior three quarters up 6% to 7%. So, you would think with inflation, it would be accelerating not decelerating, is that just consumers returning to card-present maybe lower transaction sizes or just splitting transactions and what's the impact that seems positive to you, right?

A - Michael Miebach {BIO 16087573 <GO>}

Yeah. David, again, I want to make sure I got the question, but what we've observed -- if you look at our trends for how switch volume and switch transactions are trending, you'll see effectively that the improvement quarter-over-quarter and switch volumes from 131% of 2019 to 136% of 2019 is a 5 point improvement compared to switch transactions which have improved from 131% to 132%. That should signal to you that there is a higher ticket size, which is happening, which you would expect because as people get out and travel more, they do so, that's higher ticket in general, they do it on credit products, which are higher ticket size as also there's as e-commerce happens, that happens to be how you get. So you're seeing that come through in the delta on a sequential basis.

Q - David Koning {BIO 7310416 <GO>}

Yeah. And I was referring more towards, it look like it's decelerating in the U.S., which seems positive, it seems good to have splitting transactions possibly happening is what it just seems like or different type somehow.

A - Michael Miebach {BIO 16087573 <GO>}

Yeah. No, I wouldn't see anything we do really different in our U.S. trends than what I just shared globally in terms of what we're seeing from a ticket size standpoint.

Q - David Koning {BIO 7310416 <GO>}

All right. Thank you.

Operator

Your next question will come from Andrew Jeffrey with Truist Securities.

Q - Andrew Jeffrey {BIO 1493346 <GO>}

Hi. Good morning, everybody. One of the more discussed topics in the market generally today is inflation. And I wonder if you could just touch on, if we do see persistent embedded global inflation whether or not that's positive for your business from a volume and or yield standpoint.

A - Sachin Mehra {BIO 15311008 <GO>}

Good morning, Andrew. So definitely significantly discussed topic, all sorts of views on that. So, here's our take. First of all, looking where it happens, here we generally distinct that you look at it, first at the macro level, what is happening across a particular market, what's the policymakers respond? So we heard the U.S. policymaker talked about this yesterday. Then there's broader impacts that go beyond our immediate business, wage growth. How does all of this in the end affect the consumers' ability to spend, so that there's a lot of macro things to consider.

On the micro side, it basically is not homogeneous. So inflation is affecting our business in different way than it would be the overall CPI. So, if you have inflation expecting rent, while it's generally not running through our rails to a large extent, so that could again be very different picture. Taking all of that into account, you'll fundamentally notwithstanding the impact that inflation has and it could be negative on consumers, on businesses and so forth. There is an impact on GDV if it's moderate inflation that is -- that would be showing in our numbers.

Q - Andrew Jeffrey {BIO 1493346 <GO>}

Okay. I assume that's been taken to account your guidance.

A - Sachin Mehra {BIO 15311008 <GO>}

Right.

Q - Andrew Jeffrey {BIO 1493346 <GO>}

Appreciate it. Thanks.

A - Sachin Mehra {BIO 15311008 <GO>}

Thank you.

Operator

Your next question will come from Jamie Friedman with Susquehanna.

Q - James Friedman {BIO 20091873 <GO>}

Hi. Thank you for taking my question. I just wanted to ask about the difference between other revenue and services revenue. I know services did great, now up 28%, 25% for the year, 28% for the quarter. But other actually grew a little bit faster. So Sachin, maybe if you could remind us what the nuance difference is. I know one's a subset of the other.

A - Sachin Mehra {BIO 15311008 <GO>}

Yeah. So in other revenue, we have a bunch of our services revenue would sit there, but there's other stuff going on in that as well. So, you've got -- for example, some of our Vocalink revenues sits in there. So, the next acquisition would sit in there. Some of the --. And so, if you're looking at the other revenue growth rate of 30%, remember 9 points of that growth came from acquisitions, which is just basically a lapping effect of the fact that you didn't have those acquisition last year at this time, and we do this point in time.

So on services, services continues to grow very nicely. A large part of that sits in another revenue, some of it sits in transaction processing, like the growth you're seeing in other revenue is being it is a combination of strong services growth plus some of the acquisitions which you're seeing come through in that growth rate there.

Q - James Friedman {BIO 20091873 <GO>}

Got it. Thank you for the clarification.

A - Sachin Mehra {BIO 15311008 <GO>}

Sure.

Operator

Your next question will come from George Mihalos with Cowen.

Q - Georgios Mihalos {BIO 20004433 <GO>}

Great. Thanks for taking my questions guys. Just very quickly. I'm curious, as you look through the weekly trends year-to-date here through January, are you seeing a lot of variability, meaning are you seeing sort of a bigger pick up as we go through the month? And then somewhat related to that, if you could talk a little bit about what you're seeing rest of the world?

A - Michael Miebach {BIO 16087573 <GO>}

Sorry, what are we seeing in the rest of the world did you say?

Q - Georgios Mihalos {BIO 20004433 <GO>}

Rest of the world versus U.S. and it looks like if I look at your volumes for credit at least the worldwide volume is now starting to accelerate a little bit and pick up. So, I'm just wondering if you're starting to see that really come into the numbers over the last couple of weeks.

A - Michael Miebach {BIO 16087573 <GO>}

Yeah. Okay. So I got your question. So look, I mean, in terms of weekly trends, they bounce around, right. I mean, there's so much which goes on in nature a weekly trends, it varies depending on the month and question. I'm not seeing anything which is highly unusual in terms of what we're sharing with you on our first three weeks of January in terms of weekly trends. But there is volatility week by week and you would expect that to be the case. And sometimes it's a comp issue as well, so you got to remember that you've got to kind of go back to what you're comparing the comp to and to see if there's differences in growth rates which is emanating from that. When we look at spend levels, that's kind of generally the case.

As it relates to rest of the world versus the U.S., look, the U.S. on a growth rate basis has a tougher comp this year in the first three weeks of January, just by virtue of the fact that we had a whole bunch come in from the economic stimulus last year. Conversely, in the rest of the world particularly in Europe, right, when you really think about what's going on there, there was a lockdown in Europe which took place last year in January. So you have an easier comp on Europe from a growth rate standpoint. So, you have to factor those in when you're looking at the growth rates there.

A - Warren Kneeshaw {BIO 16549173 <GO>}

I think we have time for just one final question.

Operator

And we'll take our final question from Jason Kupferberg with Bank of America.

Q - Jason Kupferberg {BIO 6867809 <GO>}

Thanks guys. Just wanted to ask a question about how we should think about quarterly cadence here of net revenue growth obviously, you told us about Q1, it sounds like Omicron and FX and rebates are somewhat of a headwind there. Your year-over-year comp obviously is much harder in the second quarter than the first quarter, but arguably you won't really have Omicron headwind at that point. So, just wanted to try and get things calibrated from a modeling standpoint at least do the first half of the year directionally as we work towards the full year target.

A - Sachin Mehra {BIO 15311008 <GO>}

Yeah Jason. So, here is our take. Obviously, we've given you some thoughts around Q1 and for the full year at this point to get you started. We'll talk a little bit more about other quarters as the year progressive, but just stepping back a bit. As we said in our remarks, we expect the cross-border travel recovery will resume as the surge passes and that will reach the cross-border travel back to the 2019 levels by the end of 2022. Look, we continue to be very active on the deal front and so that needs to be taken into account. But overall, here's what I would say that the base of cross-border travel recovery will be a key determinant, as to how that cadence plays out. And more to come as we go through the year, I'll share a little bit more about what we think about ensuing quarters, but right now that's the extent of what I'm going to share with you.

A - Warren Kneeshaw {BIO 16549173 <GO>}

Great. Thanks Sachin. Michael, any final comments?

A - Michael Miebach {BIO 16087573 <GO>}

Yeah. I was hoping last question would be for me. Anyway. So, thank you for all your questions. As you see we're optimistic with the outlook, we reaffirmed our three-year guidance that we gave you in November. I don't think there's any need to repeat anything we said. I just like to thank you for your support. And as usual, I'll call out for people that make all of this happen. Thank you, and speak to you next quarter.

Operator

This concludes today's conference call. Thank you for participating. You may now disconnect.