JPMorgan Technology, Media and Telecom Conference

Company Participants

- Dave O'Hara, CFO Applications and Services, Cloud and Enterprise
- Mark Murphy, Analyst

Other Participants

- Unidentified Participant, Analyst, Unknown

Presentation

Mark Murphy {BIO 1542399 <GO>}

Hi. Good morning, everyone. Thank you very much for joining us. I'm Mark Murphy, software analyst with JPMorgan.

It is a great pleasure to be joined here by Dave O'Hara, who is CFO of Applications and Services, Cloud and Enterprise for Microsoft. So many of the parts to the business that are critically topical to all of us these days. Dave, thank you for joining us.

Dave O'Hara

Absolutely.

Mark Murphy {BIO 1542399 <GO>}

I'm actually going to begin by mentioning the safe harbor statement before we begin. Microsoft may make some forward-looking statements during this presentation. And you should refer to their SEC filings for the risk factors relating to their business. And that's true whether you are here in person or listening on the Web.

How'd I do?

Dave O'Hara

Great.

Mark Murphy {BIO 1542399 <GO>}

So Dave, do you want to start with any type of opening comments? Or any type of quick introduction, opening comments you want to make, or do you want to just dive straight into Q&A?

Dave O'Hara

Well just a couple of comments for setup. One is, as you mentioned, I'm CFO for ASCE. The ASCE, for those that maybe aren't as familiar, is what we think of as Office and online. This (technical difficulty) C&E is what used to be the old server and tools businesses. So it's Azure and SQL.

If you look across ASC and C&E, they essentially represent the bulk of our commercial business from a Microsoft perspective and then some consumer stuff thrown in. So must of the stuff that we deal with on the day to day basis has to do with the commercial business.

Mark Murphy {BIO 1542399 <GO>}

Okay. You've been with the company for about 15 years -- and I'm not including the Great Plains part of the existence -- so it's a long time you've been there. I think externally it feels a lot more exciting and dynamic than it did to us several years ago.

The company is executing one of the most successful cloud transformations that we've seen. I think there is a feeling that the innovation engine is really cranking; you've got great stuff coming out of the research lab.

And there is also this newfound type of openness coming out of the company towards other operating systems, other competitors in the ecosystem. What is it that has you must excited at this point? And what do you think it means for the future of Microsoft?

Dave O'Hara

Sure. Well so I think there's a lot of things to be excited about. You mentioned the Great Plains acquisition; I did come in through Great Plains.

I think one of the very first people in that, certainly within the first week, was Satya. Satya was on -- was running what was then known as bCentral. And Satya became part of the Dynamics business. So we worked together back then and then also in the Bing days.

Then he was running what's now C&E. So I feel like Satya is bringing both a considerable breadth of understanding of the business, because he's worked in so many different parts of it. And I think he can -- it's easier for him maybe to see all the connected pieces. And he just brings a new openness, as you mentioned, with some of the partnerships that we have.

But if you look at where the company has come in the last couple years, I think it's fairly instrumental in showing where we're going, which is some of the Office on the iPad, for example, SQL on Linux. Both of those are just examples of where we're really more focused on embracing what the customer wants. And when they want it. And in what environment they want that to run.

So it's not about you're either Microsoft or you're not Microsoft. I think it's just a new way of working in the world that we have, which is you can be on Microsoft on some of your products. And open-source on others; and we can make it all work together.

So I think it's just really -- we're forming deep partnerships. We're working with customers to run a more open environment. We're offering products that we haven't offered in the past.

The shift from on-prem to cloud, all of those things are things that we jumped on early. I think Steve started a lot of that; Satya has continued that and, I think, continued it in an accelerated way.

Then the last thing I would just say is, as we move into the cloud world there is a lot of benefits to being in the cloud. There is also a lot of -- not everybody can be in the cloud. It's an expensive business to be in. And it takes a lot to get to scale.

I feel like we're on the front end of that. We started early and I think we're probably -- that's one of the reasons we're a leader in the cloud is we started early, we invested early. And we have a good -- I think we're in a good spot.

Mark Murphy {BIO 1542399 <GO>}

In terms of being in a good spot, we actually published a CIO survey last month, over 200 CIOs responsible for $126 billion in annual IT spending. One of the questions was: Moving forward, which of the IT megavendors will be the most critical and indispensable to your IT infrastructure?

Microsoft is (technical difficulty) claiming 47% of that vote. And that was actually up from what we had seen in prior years. That was up by (technical difficulty).

So what was interesting was looking at the list below that. Amazon AWS came in second on that list; and so they edged out Cisco, which kind of held ground.

When you look at the composition of the list below that, everyone else from Oracle to SAP to EMC and IBM lost ground from the prior survey.

So I want to ask you: How would you interpret that? When you consider that (technical difficulty) change happening below the level of Microsoft? What is it showing us?

Dave O'Hara

Well I think it is certainly showing a trend in the cloud. AWS showing up on the list is a business that didn't even exist 10 years ago, barely existed five years ago. So the cloud I think is a big piece of that. Some of the folks on that list have done better than others in the cloud. And I think that shows up in your survey.

Strictly from a Microsoft perspective, it's great to see certainly. I think we have a good trusted relationship with enterprise. And so they talk to us about a lot of their needs.

We have a few things that maybe don't -- that maybe aren't available from everybody else. One is we do have a hybrid environment.

We see a lot of our customers who are both on-prem, in cloud; and it's not an either/or. They really feel the need to continue getting value out of the investments they've already made in on-prem. But also augmenting that with the cloud. So I think we offer that, which is unique and differentiated.

We have a bigger geo footprint than most I think, certainly in any country we have a good presence in. You see that in how we're building out the cloud, which is we want to serve countries and -- or we want to serve all geos and make sure that customers are getting cloud wherever they need it whenever they need it.

So I think that's probably part of the reason that we show up high on the list is we're an existing vendor with them. They probably have a lot of our tech already. They want to augment it with even more of our tech. And they have a trusted relationship with us.

Mark Murphy {BIO 1542399 <GO>}

One of the other questions in the survey, we asked all these CIOs how much of their infrastructure-as-a-service work would be conducted on the various IaaS platforms in future years. So this was a forward-looking question.

We were asking across Amazon AWS, Azure. And also the Google cloud platform. And what we saw was interesting. It came in 25% for AWS; 24% for Azure.

So what I would say is, if that is going to be correct, that would represent a pretty material recalibration of the market share as it stands today, right? What is it that would enable that type of recalibration?

Dave O'Hara

Well I would step back for a second and just say from a cloud perspective we really see the cloud as being -- the cloud overall, the cloud business overall -- we really see that as being even bigger than the existing IT business today. So I think just moving

to the cloud, there is an inherent growth rate in how you think about cloud versus previous IT setups.

So I think it's going to be a bigger pie. Hopefully we'll get our share of the pie. We're working hard to get our share of the pie.

I do think that a lot of customers just want -- they don't want to take a dependency on one vendor. And there so many different workloads that they can parse out some of those workloads. Some of it they can run on AWS and some on Azure.

From our -- from a Microsoft perspective, we really look at the cloud offering as being the whole cloud offering. It's 365; it's CRM; it's ERP; it's our EMS solution; it's CE core Azure infrastructure. So I think that it's not just the infrastructure piece. It certainly will be competitive from an infrastructure piece. But it's about the value-added services on top of that.

And I think all of that shows up in the survey. I do think that customers genuinely are looking to do business with more than one vendor. And they like the offerings from more than one vendor. And so they'll figure out a way to make all that work together.

Mark Murphy {BIO 1542399 <GO>}

What do you think, Dave, the impact of price cuts will be in the future? I think we look back on this, we can now see (technical difficulty) data for AWS. And it will be on this incredible growth trajectory. Then there will be a quarter where they execute some price cuts. And the top line will flatten out sequentially for about a quarter there, maybe even a minor decline; and then it will get back on this trajectory.

I am wondering from your perspective, how do you deal with and how do you handle price cuts? They may be executed by you, they may be executed by others.

And as part of that question, do you think you are inherently a part of this stack that over time just gets priced down in a spot market? Is there a commodity part of this stack that you compare and contrast to (technical difficulty) IP?

Dave O'Hara

Yes, I don't know if I'd use the word commodity. I would certainly -- from an infrastructure perspective, that's table stakes for being in the game. So we feel like that's a core part of the offering; but really we feel like the ultimate value is in the services that are offered on top of the infrastructure.

But you need the infrastructure to make all that work. So we do believe that infrastructure will continue to be a critical part of it. But we think it's about the bigger cloud picture and less about how we think about infrastructure.

From a pricing perspective, the last couple years or the last 18 months have been more sane maybe than the first couple years that preceded that. There's a lot of question about how big it will be. And who is going to get what share.

We're always going to be competitive on price. I don't think you will ever see us lead price down. But we're certainly going to be competitive on price.

At the same time that price has been, costs have been going down as well as people get scale. I think implied, when people ask the question about price, implied in that is whatever price changes you make down just causes you to lose money. We believe at the same time that as pricing gets adjusted down our costs are getting adjusted down, we're getting the benefits of scale. And so we still think there's good margins in the infrastructure business.

But really it's about the whole cloud business.

Mark Murphy {BIO 1542399 <GO>}

Let me give you a quick question on a different type of survey that we did also last month. We published a survey of 43 of Microsoft's top resell partners -- resellers, distributors, consulting firms, etc. We asked them to rate all your products in terms of their momentum.

I think, not surprisingly, Azure and Office 365 came in first and second. I think we'd all expect that.

I think the question we commonly get is: How do you sustain the growth? These businesses are reaching some type of (technical difficulty). How do see the sustainability of the growth trends for Office 365 and Azure moving forward? And do you have any thought on just overall what inning we're in for each of those segments?

Dave O'Hara

Sure. Well let me talk about 365 first. I think we've shared some numbers at (technical difficulty) analyst briefing which -- time flies, I'd say it's probably a year ago -- where we talked about Office and its transition to the cloud. We said that by FY18 I think we said that two-thirds of our exchange workflows would be in the cloud. And by FY18 I think half of our Office workflows would be in the cloud. So that's even a couple years out, a year out, whatever, however you want to measure it from a fiscal-year perspective. So we feel like there is a lot of runway in Office.

The other thing I would mention is with our E5 offering which we just launched there is an opportunity to provide additional SKUs in Office that provide additional functionality with that. It's got Power BI and security and voice in the cloud. And those are all new offerings for us.

I think sometimes people look at it and say Office has really high penetration. And it's at the upper end of its market. But we really believe, one, there is a lot of cloud runway left; and, two, there is an opportunity through Office and through (technical difficulty) to bring in new services that we haven't offered yet.

And it's a great way to do it. Candidly, it's a great way to do it cost-effectively, which we're already in those sales environments, we're already talking to those customers.

So we think there's new offerings we can bring. So we don't look at Office and say what it is today is what it will be five years from now. We really think there is a chance to build out that business in a very healthy way.

Mark Murphy {BIO 1542399 <GO>}

Then let's go directly into that. The assessment across your partners in terms of the technology, the vision, the momentum of the company is lopsidedly positive. That comes through very clearly in our survey work.

What is it that you think that they are looking (technical difficulty) they're looking for? Clearly then many would be referring to Azure and Office 365. But are there technologies that are on the leading edge? Are there emerging technologies? Maybe there are products in the research labs that perhaps some of your partners are more mindful of or have a better awareness than the rest of us externally at this point?

Dave O'Hara

Well let me get give a little longer answer than that. But I'll try to keep it short. One is that I think from a cloud perspective there just aren't going to be that many cloud vendors that compete (technical difficulty). And if you are a partner, what you want is you want new opportunities, because for partners they need to go in and generate new revenue. So new markets and new opportunities mean new revenue for partners. I think they legitimately see Microsoft as one of the cloud vendors that's going to be around a while.

I'll again go back to my second point with E5. Those are all new services that we haven't previously offered. And those are all new services that maybe haven't had a partner strategy in the past. There might have been companies providing some of those services that didn't embrace partners or had a more direct approach; and I think partners see it as an opportunity for them to break into new categories.

I also think the third thing is that there's new stuff for them to bring to customers, rather than maybe they've been (technical difficulty) the same solutions for the last few years and maybe it's getting a little stale. There is something new for them to talk about.

So I think it's the combination of all those things. They see us as viable, they see us as trusted, they see us as coming out with new services, a new opportunity for them to go build some trust and make some money with some customers. And that (technical difficulty).

Mark Murphy {BIO 1542399 <GO>}

For the benefit of the audience, the elements of the E5 SKU that you're referring to as being new, are you speaking of Power BI, or you're speaking to (technical difficulty)?

Dave O'Hara

Well so we've had a voice offering, we've had a Power BI offering, we've even had security offerings. But if you look at what (technical difficulty) in E5, there's a lot of newness in each of those.

Power BI as an example, I think that what we had before was maybe not the easiest solution to implement and didn't have a broad appeal. What we do with Power BI now I think is certainly easier set up, easier to run, has a better appeal for consumers.

Before it was literally power users on the business intelligence that saw the value in Power BI. And I think with our pricing strategy and our go-to-market strategy this implies and even if you look at the ease-of-use, the visualization, people look at Power BI now and they say: Hi. that has applicability to a broader set of the customer base. The more users can take advantage of it, which again from a partner perspective, is just all goodness.

Mark Murphy {BIO 1542399 <GO>}

With all this goodness coming down the pipeline and all the innovation that we're seeing from Microsoft, what is it that you think might be missing from your cloud portfolio? I think we do field a lot of questions on the build-versus-buy decision. When you look back on it, it feels like the approach has been much more build recently.

Dave O'Hara

I think it's been much more build. But even if you look at -- again going back to E5 with our security offering, there is a couple of components in there from companies that we acquired. A lot of times what we would do for an acquisition would be considered in Microsoft terms a tuck-in. But it's super-strategic. I think that security is an example (technical difficulty)

It is hard for any one company to catch up. So we always have a good, solid, organic growth strategy and we'll continue to do that.

But I do think there are select acquisitions we can do that will augment the offerings that we have. Then our job is to put those together in a way that makes sense for our customers and have a good go-to-market strategy. But we'll continue to pursue M&A opportunities (technical difficulty).

Mark Murphy {BIO 1542399 <GO>}

(technical difficulty) Let's talk for a moment about your transactional versus the annuity business. I think broadly we see so many signs that Microsoft is a net consolidator of spend across the industry in a whole lot of new areas, gaining scale -- gaining share, excuse me, in markets with large-scale.

In the most recent quarter, I think it was clear the core fundamentals remain very solidly attached. Everything having to do with annuity, everything having to do with cloud. But you had mentioned a larger than expected decline in the transactional business, which I think as part of that included some of the on-premise server business.

So I actually -- if it's okay with you, I want to ask you a few questions on this. The first one, which (technical difficulty)?

Dave O'Hara

Well transactional is across both the Office products and the server products. So it was both.

Mark Murphy {BIO 1542399 <GO>}

Office and server? Then which geographies -- I think we were curious; almost every company is mentioning Russia, Brazil, China, emerging markets generally. Is that where you saw the issues? Did it extend beyond that?

Dave O'Hara

Yes. That was part of it. Just a couple of data points which we publish: one is that from a commercial business perspective, 86% of our revenue is annuity. And that percentage is growing. So we've been on a push to get people to do more annuities versus non-annuity; and the annuity piece is the transactional piece.

So some of this is a natural transition. Those get accounted for a little differently. So I think there's been a move somewhat away from non-annuity to annuity, which we see as goodness.

There was also some weakness for the reasons that you mentioned, Mark. It's Brazil, Russia, etc. Those markets are less annuity.

So when we're talking about 86%, that's across the commercial business, all up. But in certain geos, they're more transaction heavy. And those would be a couple of geos that are transaction heavy.

Mark Murphy {BIO 1542399 <GO>}

If you step back, you think through what happened with transactional. And we're all trying to weigh, it could be -- that could be largely macro or it could be an effect of this transition from on-prem to cloud.

What are you using as a guide to try to understand what was driving the dynamic?

Dave O'Hara

Sure. I think it's two things. Certainly those two.

I think there is a geo flavor to it. There is also a non-annuity versus annuity. Then I think there's just a lot of customers that are trying to figure out what they're going to do.

Are we going to go to the cloud? When are we going to go to the cloud? What's that look like? What (technical difficulty)?

So maybe they are just stepping back and saying: Let's take a long-term view on this. And we're working with them on that. I think all of those things contributed to probably a little softer transaction business than we had expected.

Mark Murphy {BIO 1542399 <GO>}

Any gut feel on whether that transaction softness intensifies from here, or abates, or maybe what will determine that going forward?

Dave O'Hara

Well I think those will all be contributing factors. Our goal really is to make sure that they're a Microsoft customer. And whether they choose to transact with us through annuity or through non-annuity, we're lessening up on that; it's more about making sure they're getting services and the products that they want from Microsoft. So we're working closely with them on that.

I would say that our guidance reflects what we see as trends in the transactional business. But we'll see how it plays out. But we feel good about the business. We feel good about where we're at.

Mark Murphy {BIO 1542399 <GO>}

Okay. Now I want to come back to -- because you had made a comment around Office 365. Going back to our partner survey, again looking at it through that lens, we asked all these partners to look across their customer base and tell us for their typical corporate client what percentage of their employees are a subscriber of Office 365 today? That came in at 39%.

We then said: Where do you think it goes in five years? That came in at 67%.

So I'd say on the one hand it speaks to -- it's a very large increase and it speaks to this (technical difficulty) roadmap (technical difficulty). On the other hand, if you try the back into an implied CAGR on that number, it's not as high as where it is today.

How do you interpret that? Because I think there could be some measures we're not capturing -- all the pricing uplift, new logos. So on and so forth -- coming just back into the opportunity and how penetrated we are into Office 365?

Dave O'Hara

Yes, I would go back to a couple of stats I mentioned earlier, which is we feel like from -- our view of the business (technical difficulty) going to be (technical difficulty) cloud in FY18. And Office will be 50% cloud in FY18. We still see good runway (technical difficulty).

Even if you just look at the business as it is today, we think we still have good, healthy room to grow and we're confident that we're in a good position. I do think that when we ask customers -- like when you ask customers questions like that -- they're looking at Office as it's constituted today. And they don't necessarily see all the new service offerings that we can augment (technical difficulty).

So I think Office will continue to increase its footprint. I think the way that shows up in our financials is price, ARPU goes up because I think people are maybe contracting with us for services that they were getting from someone else previously. So it results in a net savings to them. But it results in a net revenue increase for us.

So I just -- I think it's -- we feel like there is good runway both in the existing business and where it's at today and the new service offerings that we'll be bringing onboard in the future.

Mark Murphy {BIO 1542399 <GO>}

Any quick comment on the decision point to make your flagship database, SQL Server, available for the first time on the Linux platform? That's been a tremendously successful product. It's in the upper right-hand corner of the Gartner quadrant --

Dave O'Hara

Yes.

Mark Murphy {BIO 1542399 <GO>}

-- for the first time. So it is being assessed as the world's number one database. Congratulations on that, by the way.

Dave O'Hara

Thank you.

What was the decision point that drove the company to keep that on the Windows platform and all of a sudden to decide to make it available on Linux, which I think happens in a year? Because I think we've also seen -- Amazon seems to be another company calling out the database industry as an area of potential for disruption and opportunity.

Yes. Well we certainly see a lot of opportunity within the database business and data in general to -- there can be a lot of really healthy growth for companies that are positioned correctly. With SQL on Linux it was really about we want to be able to give -- we want to be able to allow a developer to write any app they want on any platform. That's what it comes down to.

And it does come down to helping customers, giving customers choice. Because I think when people look at SQL on Linux and they say, wow, is that a big revenue opportunity? Is that -- how do you think about that? I think long-term there is a lot of good revenue opportunity there.

In the short term, what we got from a lot of customers was just a sense of relief that they could continue to run the stuff that they're running now. And they could continue to look at new options. So it's really about giving customers choice.

So it wasn't -- we weren't focused on -- we were focused on (technical difficulty) saying you can run what you want when you want. And we'll figure out a way to make it work. So I think customers saw it as good for the current environment and the future environment.

Mark Murphy {BIO 1542399 <GO>}

Let's come back; I want to ask you one or two more quick questions and then we'll poll the audience and see if anyone would want to ask anything. I want to come back to E5, because you've already mentioned it a couple times this morning. So you have this new E5 option for licensing Office 365. It's your top-of-the-line plan. It's the primo plan.

I think our understanding was that E4 was not a really heavily adopted SKU. Perhaps there is a misperception on that. I think E3 was very heavily adopted.

So you're early on; you're very early on in this. What do you expect out of E5? Is there anything you've observed so far in the early innings in terms of just how customers themselves are responding to E5?

Dave O'Hara

Yes. E5 we just launched in Q3. To your point, Mark, E3 was certainly our hero SKU, though, where we had (technical difficulty) penetration. And we felt like E5 is a good augmentation (technical difficulty).

If you look at what's available on E3s, Office Exchange and SharePoint and Skype for Business in E5. It has the security offering. It has Power BI. And it has more voice functionality. So what we're getting from customers is a lot of curiosity about what it's going to offer that isn't in E3. So we think we have a good value prop around that.

I also think if you look at the components of E5 and how people would adopt those: Power BIs they can adopt right away; security is something they can certainly adopt right away; voice maybe takes a little longer.

So what we typically see as Enterprise agreements come due people just take a look at their mix and say: Hi. (technical difficulty) new offering out there, how should we think about that? So it gives us a good opportunity to go in and explain the value prop.

I certainly think there is a lot of differentiation between E5 and E3. There is a lot of goodness in there (technical difficulty) IP revenue that they are paying to a different provider. And that they now decide to go with Microsoft for that. Which we see that as a big opportunity for us.

Mark Murphy {BIO 1542399 <GO>}

You mentioned voice. And I want to go into that topic, Skype for Business. We've seen a lot of indications that there is strong potential for that product. I was with an IT team recently talking about the potential for that to cause their Microsoft spending to uplift in future years.

Could you walk us through that? Because I think we're all trying to understand whether (technical difficulty) the communications market with Skype for Business?

Dave O'Hara

I would describe it this way. Voice is complicated, as anybody who runs voice infrastructure knows. It's something that you don't just throw it out there.

I think even with the cloud and on-prem there is -- the question we get is: Do you think the world is going to flip to cloud? It's not going to flip. It's all about a transition and it's all about an orderly transition.

Voice is probably that (technical difficulty) so nobody is going to -- it's unlikely that companies are going to go ahead and just throw out the PBX and move to us. But they might do it (technical difficulty) organization at a time. Or they might literally say: Hi. we're bringing a new building online. So we'll go use your voice solution for that building.

But people don't want to lose their communication capability. And so they are very thoughtful about how and when and why they do that. So I do think that that will -- I do think that over time (technical difficulty) opportunity for us. I just think it's -- in that way voice is similar a little bit to an ERP or CRM app, which you don't just throw it out and start over on day one. You've got to build toward it. And we see that as a good long-term build opportunity for us.

Mark Murphy {BIO 1542399 <GO>}

So not a quick boom but a solid, long-term (multiple speakers)

Dave O'Hara

Solid, long-term multibillion-dollar market.

Mark Murphy {BIO 1542399 <GO>}

Okay. We have just a few moments left. Why don't we check for questions from the audience? If you would, raise your hand if you have a question. And we have a microphone right here in the center aisle. We have one right here.

Questions And Answers

Q - Unidentified Participant
Thanks. Can you talk about recent growth in the SQL Server business and competitive dynamics in that business?

A - Dave O'Hara
Sure. I missed the first word. What type of growth is your descriptor?

Q - Unidentified Participant
Just recent historical growth.

A - Dave O'Hara
Recent? Recent growth, okay; thank you. I do feel -- if you define SQL as strictly license database I think that we look at that as being upper-single-digit growth. We felt -- we feel good about, to Mark's earlier (technical difficulty) about where we're positioned in the market. We feel good about SQL. We feel good about how we're positioned relative to competitors.

So I think there is an opportunity for us to go take some share from existing competitors. I think the market overall will grow. The analysts have all been in the mid-single digits, maybe a little stronger than that; we would certainly expect to get our share.

So we will see growth with the market in terms of license database. I also think with SQL Azure that will grow along with the size of that market as well.

When we look at SQL, we really look at SQL across cloud and on-prem. But from an on-prem perspective, we certainly expect that we'll pick up some share along the way from an on-prem perspective.

Q - Unidentified Participant

Can you provide your thoughts on key success factors for sustained competitive advantage in services?

A - Dave O'Hara

Sustained competitive advantage in services? I think you need to have the infrastructure to support the services, which is why we're having the big cloud build out. You need to have services that are easy to set up, easy to digest. And easy to use.

To state the other obvious point, you need to have services that people want. Then I think from a Microsoft perspective in terms of how you think about competitive differentiation, from an enterprise perspective we're in all of those accounts; we have trusted relationships that are expensive to build. It takes a long time. Hard to replicate.

So you've got to have all that. I think you got to have the right services, you have the right go-to-market strategy and have the relationship with customers. And you have to have the infrastructure.

Q - Unidentified Participant

On the transaction slowdown, how much of that is self-inflicted versus other?

A - Dave O'Hara

It's hard to parse. We get as much precision as we can; but we go in and say: Okay, how much of this is due to shift from non-annuity to annuity? And we have an estimate of how much that is.

We say: How much is due to things like geo-specific issues? We have an estimate of how much that is.

I would say that if you say transactional slowdown, I would also put it in context, which is our transactional slowdown was around $100 million in a $12 billion

business. So we don't see it as -- it's not Armageddon by any stretch.

But -- so we would say some of that is shift, some of that is geo weakness, some of it is probably just a little bit of an unknown. And we tried to build all of that into how we view the future.

A - Mark Murphy {BIO 1542399 <GO>}

Okay, with that, we are out of time. Dave, thank you very kindly for spending it with us. Great having you here.

A - Dave O'Hara

Sure. Thanks, Mark. Thanks.