Excelling at Excel: PivotTables and PivotCharts

JOSH: Hi, everyone. My name is Josh, and I'm the program coordinator here with global connections. I'd like to thank you all for registering for tonight's webinar, "Excelling at Excel with Stony Brooks." I'm very excited to be able to have him here tonight to teach us some tricks and tips on how to use Excel to help you in your daily life. So, without any further ado, I'd like to turn it over to Stony. And let's begin. Thanks.

STONY BROOKS: Pivot tables and pivot charts allow us to visualize our data in a much simpler way, and be able to get some pretty good answers to questions that we may have about it. A lot of the uses of pivot tables and pivot charts are generally for small businesses, or what not. But tonight I've got an example that every single one of us should be able to understand and work with. The equivalent of balancing a check, but in today's age.

I'd like to ask everyone that, if you have any questions, comments, concerns, any of that stuff please feel free to use the chat box at the bottom of your screen. I will be monitoring that as well as the folks with The Global Connections. And I'll be happy to stop and interrupt my train of thought to answer your question when you have it. I don't want to wait until the end and then we both forget whatever is needed. So please do not hesitate, and I'm happy to go along with this.

So, here, in just a second, I'm going to turn off my video, because you don't need to be seeing my face. Instead we need to be seeing the Excel sheet, itself. So, as was mentioned, please follow along. If you do not have that Excel sheet please let us know and we will go from there. So give me just a couple seconds to kill the video, pull up the Excel sheet, and we will get started.

You will see that this Excel sheet is some data that I created that is to represent, basically, credit card transactions. So if we were to go onto a credit card or a bank website, and we want to do some analysis of our own, of our expenditures.

I have a number of different columns here, six of them, specifically, that outline the type of data that I have. Having our data in this columnar format is absolutely necessary in order for the pivot table and chart to be able to do its analysis.

So the first row needs to be the column titles. So our headers, if you will, transaction date, posted date, card number, category, debit, and credit. For those of you who are playing along

at home you'll see I had some time on my hands and I made a nice handful of data, about 605 transactions worth.

Now I don't know about you, but trying to eyeball all of this data to figure out where my money is going, and when, seems a little overwhelming. Though I could do some basic Excel functions to try to figure it out, but that could get rather complicated rather quickly with a whole bunch of logic and almost programming. That's not much fun. And your average Excel user is not going to know exactly how to create those kinds of functions, nor should you. If it's not something that you do in a day in day out basis it's not necessary.

One tool that is built into Excel, and, by the way, I am using Excel 2013. What I'm doing here should work just fine in 2010 as well. 2007 and earlier I'm not 100% on. So if anybody is using older versions of Excel I really hope it works. And, if not, well hopefully you can follow along and see what I'm doing.

OK, I don't see any questions yet so that makes me happy. From here we are going to want to create a pivot table. But before we do that, we need to figure out what are the questions that we would like to ask all of this data. Basically, what answers do we want to get?

If, based on this transactional data, I want to know where my money is going by category well then I've already got that. Great, I've got the categories and I've got the money. I could figure that out.

If I wanted to know when I'm spending my money, well I have all of these dates here, and that's useful. but knowing a specific date might be a little too much detail. So one thing that I would want to know is, where is my money going per month> If I want to look at this by the month.

To do that we need to add some additional data into this sheet. So I'm going to create a brand new column here.

The header for this is going to be month, pretty straightforward, and I'm going to need to use a formula. This formula is going to be equals because all excel formulas begin on equals. Text, text is the actual function that we're doing. So equals text is left parenthesise.

And you'll see here that text wants two different things, it wants the value and it wants the format. The value is what is the specific data that we want to change, in this case. So I want to

change the transaction dates. I want to figure out what the month of this is going to be.

And the format, to get the month in here inside of quote marks type four Ms. MMMM, end the quotes, and put in a right parenthesise. If anyone's having trouble seeing this formula please let me know in the chat. I can blow it up and make it easier to read.

So equals text, then my column value, A2, and four Ms inside quotes. Hit enter, and I get October. Yes, absolutely, Gabrielle.

So what I'll do is I will put it right here. Hopefully that's big. Is it imperative to separate with comma? Yes, it is.

That comma is absolutely necessary because it tells the Excel function where the first part of the data it needs, and the second part of the data it needs is. Without the comma this text function is going to think the entire thing is the value that we want to manipulate. So the comma is absolutely necessary. Good question though, Hope.

OK, so we got the month of October, and we know that's right. So instead of having to do this formula half a million more times, if when you click on the cell you should see that there is a slightly larger green box in the bottom right hand corner. If you hover your mouse over that it changes from this big fat plus to a skinny plus.

When your mouse is at the skinny plus, if you double left click it copies the formula all the way down. Saves us a lot of time. And we can see now we've gone from October to September. Keep going and we'll have August, and July. So that formula paister is very helpful.

All right. So what? 11 size. Change all this back down to 11 size as well. OK.

So one other thing that might be interesting is, in addition to the month, maybe we want to know what day of the week. I would kind of like to know if, maybe, I'm spending more money on dining on Friday's. End of the week, I'm too tired to cook. Heck with it, I'm going out to eat.

Well there's a formula for that too. I'm going to call this DOW, for day of week. And the formula is going to be exactly the same as the last formula, but instead of the four Ms we're going to use four Ds.

So equals, text, left parentheses, the date, put in that comma to separate your values. And inside the quotations four Ds. DDDD. Finish that up. Hit enter. And I know that the ninth of

October is a Friday. Let me blow that up big over here so anyone can see it. Whoops, too big.

So doing the same thing now, double-clicking that box, I get to paste the formula all the way down. And I now know which day of the week each of these transactions happen at. You know, honestly, thank you excel for giving me a nice easy formula to do this, versus having to look up a calendar and do this all by hand. That would take a lot of time. It would be a pain in the butt.

So, unless anyone has any questions about this, it's time for us to make our pivot table. I'll pause a second to see if anyone needs anything. All right, no news is good news. We will move on.

So now it's time for us to make the pivot table. Oh, I'll give you two minutes. I'm sorry to hear that, Bernie. Unfortunately, I don't know. I don't know if I can truly pause for that two minutes, but I promise I'll go slow. I don't want to keep everyone waiting, I'm sorry.

All right, so to create our pivot table, what we want to do is select pretty much any of these cells that's inside of our data. In fact, just to be safe, I'm going to select all of our date. Whoops, hello. What happened here?

So I'm going to click, and drag, and highlight everything from cell A1 over to H1, and then scrolling all the way down to the bottom of it, in the 600's. I'm now going to go to the insert tab of the ribbon up top, and our first option is a pivot table. Go ahead and click that.

And here's our options. If you did not select all of your data in the first place it now gives you the opportunity and option to do that. So it says transactions, which is the name of our worksheet, and then cells A1 through H606, that's what we need.

We can also choose whether to put this on a new worksheet, or on a worksheet that already exists. Since there's really no point in having it in the same thing as our data here, I'm going to put it onto a new worksheet. Hit OK. And hopefully you all see this screen now.

Now this looks a little different than your normal Excel stuff. This pivot tables got a few extra functions and features that we need to be working with. We can give our pivot table, itself, a name. I'm going to call it transactions. Notice that it changed it's name.

Also, we need to tell it what data to analyze. So when I clicked on one of these other random cells over here I get nothing, but when I click back on this little pivot table box, on the right

hand side, you'll see this, pivot table fields.

This, right here, is why it was so important to have those labels at the top of our columns. So all of our information, our different columns, are right here. Underneath it tells us what we can do. Drag fields between areas below.

This gives us the opportunity to choose how we want to break our data apart. So we have a couple of decisions to make. The first decision I make is for the values, the lower right hand quadrant here. This values is asking, what is the data itself that you need to see? Not how do you want to separate it? Not how do you want to break it up? But what is the data, itself, that will give you the answers you need?

For me, that is debits. Anyone who's taken your basic accounting class remembers debits and credits. You got to love it. The debits are expenditures. This is money that I have spent.

I am going to click on debits, and drag it down to the value section, and let go. By doing that you should see that the pivot table has already started to change. The count of debit is not what I need right now, but we'll come back and fix that in a minute.

What this is saying is the grand total number of different debits in the data is 539. 539 transactions have occurred where I've spent money. That's useful, but that's not necessarily what I exactly need to know right now.

So how do I want to divvy up this count of debit? Well one thing I might want to know is, what categories are my debits occurring in? So are most of my transactions for dining? Or entertainment? Or utilities? Or whatever? We can figure that out here.

By clicking and dragging the category field underneath either columns or rows, both will work fine it just depends on how you want to see it. I'm going to go with columns for now. Let it go in columns, and look at what appears.

We now have a count of debit that's broken up by each of the different possibilities for category, and at the very end we have a grand total. So we still see that 539, but you could see, oh boy, whoever's transaction this is sure likes to buy stuff. And go out to eat, it looks like.

Three transactions for utilities, 118 for dining. Wow. This it's useful, but we can still do better.

We want to [? best ?] possibly also know which time periods did these different things occur

in? So if we click transaction date, and drag it to rows, lookie there. Now we see the count of the debits, by category, by day.

We have a three dimensional data analysis here. But now, hopefully, you all can see why, just using the data itself, isn't, necessarily, the most useful thing. This is a lot to look at. Not great, right? This is too much, too detailed.

So instead of by transaction date I'm just going to drag this back up top so we clear it out. Let's now do it by month. If we put month under the rows. Hey, that's something that looks quite a bit more useful here.

So now I can see that, well, looks like this person decided to stop dining out as often. Now September is less, and October is less. Gas seems to be about right. Health care seems to be about the same. Decided to buy a lot more merchandise in September. And we start to be able to take that 600 and some odd rows of data and make it more user friendly for you.

The count though, you know, that's cool and all. But what of this is 40 transactions that were for a candy bar? We're spending $0.75 a time. Versus 10 entertainment options of concert tickets at $100 apiece. Having the amounts is probably much more useful to us right now.

Excel has a number of mathematical functions already built in here for us. This one is just adding up the number of them. If we come down to the values section, we can click on the little drop down right next to the word count of debit, and change the value field settings, this bottom option here.

When you click that we get a bunch of different choices here. We could have a sum, which adds it up. The average, The max finds what was the maximum amount. So if you want to see what the highest expenditure was in that category. Minimum finds the lowest. We could find the standard deviation, the variance if you are feeling statistical.

I'm not feeling statistical today. I just want to know the sum. I want to know how much money was spent in each of these categories.

To make it look a little more professional we can also format the numbers. So clicking this bottom button down here gives us the options to format this how we see fit. Percentages, scientific numbers, whatever, but the one that makes the most sense to me, in this case, is currency, since we're talking dollars and cents.

You can pick how many decimal places, which symbol, depending on which currency you're dealing with. What accounting format you want, all that stuff. For me, these basic options are good enough. So I'm going to hit OK. Watch what's about to happen to our pivot table now, after I hit OK again. Step ahead of myself.

And look at that. This is where we-- I was about to say, this is the money. But well, of course, yeah, duh, it's the money. Bad pun.

But this is where we can get some really good value for, honestly, pretty simple. Compared to having to do this in more standard Excel ways.

So where does the money go? Look at-- wow, that's a lot of merchandise expenditures happening in September, $3,336.75. Lodging for $612? Wow, that is not light.

And, of course, the pivot table here also gives us totals. These totals along the bottom are the totals for each category. The totals along the right side are for each month. So hopefully we can start to see how we can get some good value out of just this little pivot table, right here.

What else can we do to make this potentially even more specific and useful for us? Well the dates were too specific. These months are good, but they're a little too general, as well. If only there was a way that we could combine them both and find a nice middle ground. Well of course there is. Why would I lead it up that way?

To be able to add extra levels of detail to this you can add another pivot table field to any of these categories down here. So if we wanted to see the month, and the date, let's go ahead and drag transaction date down to the rows. But make sure you drag it, and drop it, underneath month. Not above it, not on top of it, but underneath the month.

Now we have every date that is part of that month underneath it. Check that out. You can also see at the beginning of every month there's a little minus symbol, so that we can expand, or collapse, all this data. So we don't have to look at it all at once.

If I just wanted details about July, look at this. I've got subtotals for just the month of July. And I have the deets, so I know exactly how much was done in July in each of these categories. But I also have the more specific details of what days did this happen?

So I noticed that September was the big merchandise months, here. Was there a specific Day well, not really. It looks like it was fairly well spread out. $300 on the first. $300 on 18th,

Whatever it may be. But now, by doing this, I'm starting to get a much clearer picture of where my money is going, and when. I'll have a better idea of a break down for what happened.

Now we can also add in more stuff too. But I will caution you, less is more. And what do I mean by that? Well, the more fields that you add into this pivot table the clunkier, the more complicated, the harder it will be to make sense of it, because you're just adding in more and more data. So the kiss method really, really applies. Keep it simple, silly.

We want to keep this simple. Let me show you an example of if we decided to really make this gummed up. If I also, in addition, to the month and date, wanted to know the due that week, I could put that in here, too. And that doesn't really help much, does it? In fact, it's exactly the same. It's just gunking it up.

Well what if I move day of the week above transaction dates? OK, this is potentially useful. So now we can see every Monday in September, and see what the expenses are. This could be of use to you, but it could also be just a lot of data.

So I'm going to remove day of the week real quick. Or, perhaps, you'll notice I have card number. If we take a look back at the raw data, itself, you'll see that this one card paid for most things, but there's another card in here that's part of this.

Gabrielle I see your question, and I'm honestly not sure. The Global Connections will have to answer that one. They hold the servers. Hey, that's fantastic. Great, this will be available for review later.

So, as I was saying, there is another card. So, perhaps, we want to see which card is spending this money by category. So I'll drag card number underneath category in the columns, and we can get those answers.

Now this is not very pretty, is it? Let me help you make sense of what's going on here. The now gray columns are subtotals per category. So these are the totals for the category across both cards. If you want to see the individual cards, you need to look at the spaces between.

So for the dining category, the card ending in 3611 has transactions in this column. Whereas the card ending in 5989 has transactions in the other column. So is this useful? Is it not? I guess that depends on what it is that you want to know. But you have the power, you easily have the power to turn this into whatever you want it to be.

What other kinds of things can we do? The fun part about pivot tables is that you can drag, and drop, and play to your heart's content without hurting anything. So, maybe, I leave card over here in the columns, and I get rid of transaction date, because that's too much, but I move category from the columns over to the rows. Now look at that. This is a much more concise way to look at this.

So by month, by category, by card. So oh boy, the card ending in 3611 spent a lot of money on health care in September. Whereas the other card did not spend so much, but that other card is our merchandise hog. This must be a shopaholic over here. We can start to really break this apart.

Oh, well I'm glad to hear that, Brie. Out of curiosity, what was your question? Maybe I can expand upon it, somehow. While you're, hopefully, typing I'll keep on.

Ah, OK, yes. How do you decipher where you place the data? Honestly, there is no rule of thumb. You know, this belongs here, this belongs there. It's more, or less, just getting in here, pivoting the data, that's what we mean by moving it across that's where the pivot name comes from, and see which way looks the best for you.

Whichever way seems easier for you to interpret. Some people like things vertically. Other people like things horizontally. It just really depends on what works best for you. No wrong answer.

A couple other things to show with this pivot table here, to help folks make sense of this. Random tidbit for you, by the way, there have been a number of studies done over the past 20 or so years, that found that people fall into one of two categories on how they view their data. Some people prefer to see data in a table, in a tabular format, similar to what we're looking at right now. Other people like to see their data graphically, with pictures, and colors, and other things like that.

Well that's, once again, the joy of all this pivot stuff. We're looking at the tables right now. Here, in a little bit, I will show you how to view this exact same data graphically. So that way both types of people can get the same value out of this. But for those of you who kind of like it both, we can add a little bit of color to this table here.

One thing we can do-- I'm just going to go ahead and expand everything to keep it simpler conceptually-- is if we wanted to just see, at an easy glance, where the big numbers are. You

want to just be able to find out where those big problems are. Well, right here, it's not so hard because we don't have a whole lot. But if we move it back to categories over here, and we put transaction data under the month again, it's hard to see it all.

Here's what I'm going to do, clicking in the upper left hand corner of the data itself, so for me that's column B6, or, otherwise, the airfare value for July the 9th. I'm going to drag a box over to utilities, and all the way down. I'm not including the totals. Unfortunately, it's currently getting the month subtotals, but that'll be OK.

With this whole thing highlighted, on the home tab right now, in about the middle, you should see a box called conditional formatting. Click on conditional formatting, and hover over highlight cells rules. In here we can choose to have conditional formatting to highlight cells that are greater than. We can also do less than, or between, or equal too. But to find the big boys we need to use greater than.

This left box over here is where we tell Excel that we want all of the cells that are above this value to be highlighted. So what's the value that we want to have highlighted? I don't know. Pick whatever makes sense to you. I'm going to go with 1,000. Actually, I'm going to go with 750, that'll make it nice and easy.

Over in this drop-down you can specify how you want it to be highlighted. For me, since these are big expenses, red. Stop doing that. Quit spending so much money. So we'll go with the light red fill. Hit OK. Yeah, we got to ignore these guys. But in our data, otherwise, any cell that is red was above $750.

So on September the fifth expenses were made in health care. I wonder what happened that day. If you decide that you don't want this conditional formatting anymore, or if you want to change it to a lower value, I'm going to go ahead and select everything. I click somewhere and I press Control A. Control A is select all.

Go to conditional formatting, clear rules from either selected cells or entire sheet, both are fine. And it gets rid of the conditional formatting.

So now I can highlight things that are greater than 500. Whoop, I don't want to highlight everything for that. See it's taking all of the dates, too.

So I can cancel that, come back and drag that box like I just did, and conditional formatting highlights cells rules greater than $500 to be red. Hit OK. See if we have anything else other

than this guy jump up. $612 that day spent on lodging, otherwise, not too shabby.

So that is just a simple way to add a little bit of color for those folks who like to see data in graphical view. Sometimes it's just a lot easier to pick a color out than it is a number. So a couple other things that we can do to be able to slice and dice this a little better. I'm trying to remember exactly where I was going with this. Yeah, OK.

So, perhaps, I'm going to get rid of the transaction date. I'll put a day a week instead, whatever. We talked about seeing if there was some day of the week that we spend more money then we should in per category, well this is how we look at it.

So it looks like Friday merchandising in October is a bad plan. Unless, of course, you're a store, then it's a really good plan. But, perhaps, we want to arrange this data.

So right now it's alphabetical by column. If you click the column labels drop down button-- you can do the same for the row labels, by the way. We can choose to sort in a bunch of different ways. So just like normal Excel data.

It's currently A to Z, but we can choose something else, like being able to make it manual. So we drags things around, or we can make it descending by the sum of debit.

What does that mean? It means that the most expensive category will be left most. And look at that. It is now descending by the sum of the debit.

So we can tell that the column that's over here in the left most is where the money is going, or at least obviously most of the money. Especially since merchandise is 7.9 thousand. The next highest category, health care, is 1.6 thousand.

We can do the same sorting by row label too, if you want. Some most [? cert ?] not ascending, descending, by sum of debit. Hit OK. And some changes have happened here as well.

I'm going to go ahead and undo those last two sorts to get us back to our basic data. To undo I just held down Control and pressed Z. If, perhaps, this is just too much data to look at, and you see that there are some categories that you just don't care about, like airfare has a total of one expense. So why is it taking up so much space? Lodging as well. Payment doesn't even have anything. Why is it here?

Well we can change the filters. Change the data filters to only show those columns that we

want to see by clicking on the category. Actually, apologies, I'm going to click and drag category down to the filter section.

Am I? What am I doing? What am I doing? Apologies. I've got my mind sorted here. OK this is what I was trying to do. Apologies.

So clicking on the column labels, the drop down again. This bottom half of the drop down is all the categories with check boxes on them. These ones that are checked are the ones that are currently shown.

So if there are certain things you don't want to see, uncheck them. So insurance only has one thing. Internet only has one thing. Lodging only has one thing. Payment doesn't even have anything. We can start there.

By unchecking those and hitting OK we can now get-- oh, other that's another good one. We can now get those out of our way so they're no longer taking up space.

One last thing I want to show about this pivot table here is another way to filter quickly. So I'm going to go ahead and go back to select all so we see all the data. Another little tool that we can add in here-- If I can find it-- underneath the pivot table tools part of the ribbon, underneath the analyze tab, is this button, insert slicer.

The slicer is a little tool that helps you slice your data. So that way you could find, specifically, those things you want. When you click insert slicer it'll ask you what is, or are, the categories that you would like to be able to divvy this up by?

So if I wanted to slice and dice by category I would select that. Hit OK, and we get this. I'm going to expand it a little bit so you can, hopefully, see everything. Think of this as your little switchboard.

Payments is grayed out because there is nothing in the payments. So we can't slice it up that way. But if I wanted to look at, oh, let's just look at health care. I'm going to click this health care button, and there it is.

Oh, now let's look at phone and cable. There you go. Oh, dining. This little slicer helps you pick and choose what you want to see quickly. If you want more than one thing hold down the Control key while you click. So if I want, let's say, airfare, lodging, and utilities as soon as I let go of the Control button those three things appear.

So I know that this is a lot of different options and opportunities you have taking in right here, and I do apologize for that. But I really wanted to show you just the amount of power you can have to change your data to give you the answers you need.

One more category to talk about. One more thing. I'm going to go ahead and reapply all this. We can take this and turn it into something visual, graphical. By clicking here, somewhere in the pivot table, on the Insert tab, and about the middle there's an option for pivot chart. I'm going to click the pivot chart.

Now it wants to know what kind of chart we want to make, and there are a bunch of options. This is going to come with a little bit of practice, to be able to determine which chart is best for your data. For this, for example, I don't think I would make a pie chart. There's just too much going on, but a line chart might be useful. They are able to track how the data is moving across time.

You can see that there are also multiple types of line charts, like a 3-D. Now I'm going to pass on that. Once again, keep it simple, but a stacked line could be good.

Yeah, I'll try a stacked line for now. I'm going to hit OK, and it puts the chart there. Let's give it some space. Not that much space. Go back.

I'm going to expand it out, make it a little bigger, easier to see. And here's our data. Cool, right?

Well, let's turn it back into something that's a bit more useful. Let's get rid of the day of the week, and so now we're looking at the sum of debit, per category, by month. Look at that.

We can do many of the same chart formatting things here that we would do with normal charts. So using the plus button in the upper right hand corner of the chart, we can dictate which elements of this chart we want to see. So if we want data labels, well useful, sure, they're kind of clunky together, but it could be useful.

Error bars if you're wanting to know significances. Axis titles so you can label it properly. So this is amount in U.S. Dollars, if I can spell. There we go. This access on the bottom here is month. Here we are.

We can also change the color and style if you don't like it. If you want to have this snazzy gray background that's easy enough. Sure, why not.

Another option, other things you could do, click on one of the data notes. So I'm clicking on the data Itself, but, actually, double click it. By double clicking that we can change all of its stuff. So if we want to be left aligned to the data points, or above the data points.

We can make it dance. Go all around. There's a bunch of different options that you can have to visualize your data here.

And other ways to get at it, by just clicking somewhere that's not in this chart area, but over in this upper corner I can right click and change the chart type. Line doesn't work very well after all. Let's see what that pie chart looks like.

So airfare is all in the month of August. Down in the bottom here I can change it over, and let's see a pie chart for dining. See what I mean why a pie chart not being the most useful? But you still can do it.

Change chart type again. Cluster column. Sure, why not? Just the dining category. Now, if we put all the categories it's going to get a little crowded. But this, for many people, will really drive home just how much this category is being spent on.

So this is what I wanted to share with you tonight, for everybody to learn how to get your data ready for this pivot table and pivot chart. How you can create a pivot chart, and manipulate it to your heart's content to answer your questions. And how, from that pivot table, you can create a chart to help you visualize your information.

I bet that you all can imagine a number of different ways that you can use these features in Excel. Obviously, for my checkbook type of example here, you just saw how useful it can be. But this could be great for a number of other things, like keeping track of a collection you might have.

If you want to have a spreadsheet to keep track of your movie's, and you wanted to know how many different movies of the action category on VHS you have, or something like that. Oh, VHS, whoops. I'm dating myself a bit. Yes, I owned a VCR once upon a time.

There are many different things that you can use this for, and, boy, does this make it easy compared to trying to do it all by hand. If anyone has any questions I will be happy to stick around and answer, to go through more examples, or do whatever we need. Otherwise, it has been a pleasure being able to present this with you. I hope it still works.

I hope that this has been of use to you all, and have a great evening. I will now turn the microphone over to The Global Connections folks, and thank you.

JOSH: Wow, thank you, Stoney, for that presentation. I know that helped me out a, lot and I hope it helped you all, as well. I am sending over a link for our survey. If you guys could take a few seconds before you leave to click on the link and submit your thoughts of how tonight went, that would be very helpful for both Global Connections and Sony to learn how we can better our programs to suit you guys. So thank you everyone, and I hope you have a great night.