Scenario Tools in Excel (Webinar)

Susan: Danielle is presenting Scenarios Tools in Excel. How are you feeling today Danielle, after suffering an injury on the weekend?

Danielle: Oh, yes I'm good, I'm good. I'm much better today. This is actually the first time I've sat at my desk for quite some time. I was in Queensland over the weekend and I just moved the wrong way. I probably should make up some story about doing something very exciting but I was actually just logging into an early morning conference call and I just moved my laptop from one place to another and I just put my back out. A morphine shot later; it then took quite a few days to recover. So I managed to get back to Sydney and I'm all good. I'm much better now.

Susan: Excellent, I'm glad you're feeling much better.

Danielle: Yeah, my kids had a lot of fun. They had to put me in a wheelchair to get me onto the plane so they were pushing me around Brisbane airport. I can see we've got quite a few people from Brisbane and apologies if you went to the Brisbane meetup because I wasn't able to make it at the last minute. I got all the way to Queensland but I didn't actually make it to the meetup. I hear it was a really good night anyway.

Susan: Well, I'm glad you're feeling much better. Especially since you're travelling again on the weekend to Perth. Tell us about that.

Danielle: Yeah, looking forward to that. I've got a really good girlfriend who lives in Perth, so I am really looking forward to catching up with her. I am going to spend Anzac Day with her and then I'm going to be training with; I do a lot of in house courses and we've got a client there, so I am going to be doing an in-house training session with them on Data Analysis and Dashboards just for one day. Then I am going to get the red eye overnight flight back to Sydney the next day.

Susan: That red eye is never fun.

Danielle: No, not looking forward to that. So I'm resting up before then, so I'm really trying to take it easy before then. Because after then I got a much bigger trip coming up. I'm going to San Jose for the Past Business Analytics Conference. I am presenting two presentations there. One is on Scenarios and Sensitivity Analysis which is quite similar to what we are going to be talking about today and the other one is on Data Visualisation. I haven't been to the States for a really long time and I'm so much looking forward to that trip. It's going to be great.

Susan: It does sound fantastic actually. You can always pack me and take me with you if you like?

Danielle: Yeah, that would be great. We'll have to organise that; you can come with me. Thank you so much for organising this webinar for me Susan. I know you've been trying to talk me into doing one for a long time and I'm a bit more of a face to face kind of person. Although I do, do a lot of online training, I recognise just the advantages of doing things online, really with a webinar like this; it helps us just to reach so many people in a much more time efficient way and we do have some on demand online training courses that are available all the time. I will be telling you about that at the end of the webinar and we've got a special coupon code for that as well. Hang on out until the end and I will tell you all about that. But, I do really like the face to face stuff as well. If you're in Sydney, Melbourne or Brisbane we do public training and I also have these meetups. I talked about the one in Brisbane. We have Sydney, Melbourne and Brisbane that I run. I think it's really important just to get together and network face to face. We modellers like to hide behind our screens and just talk to our Excel formulas but I think it's really nice for us to get out there and meet face to face as well.

We have a meetup in New York; I've got somebody running one there and London, Delhi, Amsterdam, Johannesburg as well. We've got quite a few all over the place. If you're Sydney, Melbourne, Brisbane and sometimes I do make it to the Perth one as well. If you're in any of those places, I'd love to meet you face to face. Those are mostly just free networking events. It's always nice to catch up, get together and talk about Excel and modelling.

Was there any other housekeeping you wanted to go over Susan before we jump in and start talking about scenarios?

Susan: No, that was it. I think if anybody has any technical issues, you're welcome to send me a message. The main technical issue that most people have could be hearing or sound. Just log out of the system, log back in again and you should be good to go again.

Danielle: Great. Okay, just looking at; most people should have logged in by now. Gosh, we've got people from all over the place. A lot of people from Australia which is great. Which means I might get to see you at some point. We've got Ballarat, Perth, Docklands, Girraween, Melbourne, Toronto, Sydney. Lots of people from Sydney, lots of people from Perth and Melbourne. Bangalore we've got, Hobart, Robina (Gold Coast); so all over the place which is fantastic.

Alright, as I said this is my first webinar. I haven't done this before so I really hope that all the technical thing will work out okay. Please bear with me if I don't get everything quite right the first time. I am going to attempt to share my desktop with you. Here goes. Can everyone see? You can see my Excel and you should be able to see my PowerPoint. Just type me a yes, if you can see my PowerPoint. Fantastic, thank you Andrea. Thanks Cole, fantastic.

Alright let's **talk about Scenario Tools in Excel**. Scenarios are probably kind of the whole point of financial modelling really. We often find that the whole point of creating a financial model is so that you can perform scenario tools and scenarios can be really, really complicated, or they can be quite simple. I am going to take you through a couple of different tools and methods. In our financial modelling training courses we go through a number of different types of scenario analysis. I am going go over them at a fairly high level today because we don't have a huge amount of time. I just want to give you a bit of an overview of the kind of tools that are available in Excel and you can certainly look into them a little bit further. I'll make this presentation to you. The recording will be available, I think and I will give the presentation. And, also I've got a couple of Excel files that I'll go through with you as well so I will make those available soon after the webinar.

Introduction to Financial Modelling in Excel

What we are going to talk about today are the different technical methods of scenario analysis and I will just do a short practical application of each of those methods. Looking at scenarios, sensitivities, what-if analysis; all of that is fairly similar but a little bit different. Each of those terms has slightly different meanings. Uncertainty is not necessarily risk and a forecast is different to a scenario usually we just do a forecast and it is base case is what we think is going to happen. If you're then able to put scenario analysis in there; if you're able to identity what those drivers are, you can then create scenario analysis by tweaking those drivers just a little bit. Typically we do a best case, a base case and a worst case but of course as the model gets more detailed we can do a lot more analysis to that.

Here's an overview of the different types of Excel scenario tools. I'm going to demonstrate each of these very, very briefly with the exception of the last one, Monte Carlo or Stochastic Simulations; is something that can be done in Excel but just in the interests of time, I am going to be going over this in our conference in San Jose, Past Business Analytics Conference. But just in the interests of time today, I'm not going to get into that because that does get quite technical.

I'm going to be taking you through some manual scenario selection, some data tables, scenario manager (not that great, but I might just show you that briefly), and we will do a very quick goal seek as well. Quite a lot to get through today.

What I would like to go over with you is just a quick case study. This is a model that if you guys have got a copy of my book, Using Excel for Business Analysis, you do get a copy of that book included if you attend any of the online training or any of the workshops. This is an example that we walk through in the book and we also cover it in the Advanced Financial Modelling training course. I would like to go through that with you. I am going to flick over to Excel, just so I can demonstrate.

You should be able to see my Excel now. We're now on a scenario comparison model. It's just a very, very brief tiny little one-page financial model. Can everybody see my Excel alright? Just flick up a yes. Susan, is everybody alright, everybody with me so far? Great. Okay, fantastic. Thanks for that. Just make sure that you can see everything alright.

What we've got here is; the first one I am going to talk about is the data validation drop downs. What we've got here is a best case, base case, worst case. So the way that we've built this is just using, you can see here that I've followed best practice. I've got all of my assumptions. I've used an input font here and I've used some calculations here; total expenses, net profit and profit margin there. So nothing overly complicated about the calculations, but the way that I've built this model is that we have everything linking back to my drivers. These are my drivers across here in Row 8. Then what we do is make those drivers change automatically depending on the drop down box. I've just used a very, very simple data validation drop down box here; so best case and then I can just change that to make it base case or I can then change it to make it worse case. And, you can see there that the output of the numbers just automatically change. That's very, very simple. The way that we've built this is very simple but it can be applied to really, really complicated financial models. The way that this works, of course, is these formulas automatically link through to my drivers and then as my drop down changes, the formula automatically changes as well. You could use a number of different formulas for that. In this case, I've used a Sum-If formula. You could have used an index match; you could have used a V-Lookup or a number of different formulas that could have been used.

Oh, we are just getting a rain storm here in Sydney. I was wondering what that noise was. It's just started to rain.

Let's go on now. That was a data validation drop down box. You guys probably know how to do that but that's just done using a data validation here. I've just done that creating a data validation drop down. Very, very simple; nothing overly complicated about that.

Let's go forward now to the very next tab. We've got here a best case, base case, worst case exactly like what we did before except I have a different kind of a drop down box and that's using a combo drop down. It works in a very, very similar way except that it's actually an object that sits over the top of the page. You can see there that if I move that away, you can see the number changing; base case, you can see that changes; worst case, and then if I hold down my Ctrl key I can move that back over the top to there, like that. Again you can see my formulas. In this case I've used a Choose function, but you could use an Index or a number of different functions for that one there. That's done using a data validation drop down. That was built using the Developer tab. You've probably noticed, I'm using Excel 2016 which is fantastic. I'm a big fan of that. You can see it might just look a little bit different to your Excel but in any case you will need to have the Developer tab installed. If you haven't got that installed you will just need to go into your options and you can see here, I've gone Insert and gone to a Combo box to create that kind of drop down box. The way that it works is exactly the same as I did with the data validation drop down except that in this case, if I click away from it, you can see that the drop down disappears. With this one, you can see it straight away. Either of those are very, very similar in the way that it's built and the way that the user can use it.

Any questions so far? Everybody with me? Am I going too fast, too slow; do you want me to pick up the pace? How's everybody going?

That's okay Nitin. That's alright, you'll be able to watch the recording and catch up a little later on.

Okay, Andrea wants to know the benefits of a Combo box over using the data validation?

Not a massive difference Andrea. It really depends on; it's really from the user perspective. For you as a developer, it's much more work to create the Combo box but it just makes it a little bit easier for the user, for the person looking at it. If I open up this model and I look at it and go, hey that's a drop down box I can see it straight away; it's kind of in your face. We're quite used to seeing drop down boxes and we know what to do when we see them, whereas if I go back to my data validation drop down box; I look at it and say hey, what am I supposed to do with this, until I click on it and go, right it's a drop down box. So that's the advantage of using a Combo drop down.

I will go now onto the data table. Going back to the PowerPoint that I was talking about earlier. What we've talked about so far, is a manual scenario selection. What I'd like to talk about now are data tables. They're a really, really different type of scenario analysis. In fact, it's not really, technically speaking it's not really a scenario analysis; it's more of a sensitivity analysis tool but they're fantastic. It looks a little bit different, this example here. You can see here that my options are actually designed quite differently. We've got the building costs per square metre down that way and the sales price going up across the top. The way that it's designed is quite different, but the fantastic thing about a data table is that you can see all of the outputs side by side. You can see every single possibility in a single table whereas, if you remember, with a drop down, we can only look at one at a time. I'm just going to go back to the other one for a second. We can only see our worst case and then if I change the drop down, we can only see our base case; it's only one at a time. Whereas, if I go to my data table now, you can see all of the simultaneously which is much better to be able to see all of the different iterations as we go through. I will just show you quickly, how to create one. You can see it's got little curly brackets in the table there. I need to highlight the whole lot and delete it, and you need to have a link here. The other limitation is that you've got to have all of the inputs and outputs on the same

page, but it does take you through step by step how to do this in the book. If you've got a copy of the book, it's on page 362. I think I've got some blog articles which explain how to do it as well. You just highlight the whole lot like that. Go to Data and go to What-If analysis here under Data table. You just need to give it your row input cells. Your row input cell is your sale price. Your column input cell is going to be your building cost and we say okay. There we go and that gives you your data table. Quite simple when I show it to you like that but it does take a little while to get your head around how a data table can work. Just a very, very quick overview of how a data table can help you. But if you've got a little bit of time, you can go through the examples I'll give you and see if you can get it working and have a think about how you can apply that to your own models.

The other thing you can do with a data table; I'm just going to go over to the next tab across, is do some probability weighting across that.

Cole's just said to point out that this is a two-way data table. That's a good point, Cole, thanks for that. You can either do a two-way data table or a one-way data table. I could have just done it with one way which is just all down one column or I can do it all along the row like that. The way I've done it, is actually a two-way data table.

What I will do next is have a look at some probability weighting because the problem; if I go back actually to my slides for a minute and just talk about probability for a second. I will go forward to here. Thinking about the likelihood of probability in scenarios is that there can only be one outcome. When you're creating a scenario, it's either going to be right or it's going to be wrong. It isn't necessarily, it could be this or it could be that, but there is only going to be one outcome and you can guarantee the only thing for sure is that it will definitely be wrong. If I were to day "according to our financial model, the annual profit will be, this much, 4.5 million, blah, blah, blah that means that our company is worth blah, blah, blah", we know that I'm actually talking rubbish because there is no way that I can possibly know that. It really is just an estimate. One thing we can do is put in some probability and that can give us a little bit of weighting and a little bit more surety around our financial model.

What I'll do is go back to my Excel. What I've done here is put in some probability weighting. I've said that under the building costs, I've said that I think it's most likely to be the base case. There is a fifteen percent chance that it's going to be the worst case and a thirty-five percent chance that it is going to be the best case. I mean that's my best guess, based on historicals or it could be a gut feel or whatever it is. Then, similarly I've done the same thing with my sale price. Importantly you have to have your probability add up to 100 percent; it won't work otherwise. Then what you do, is you just multiply it out. Now we all know how important using mixed cell referencing is. I've used some mixed cell referencing in this case. We just copy that across and down and that gives us our probability weighting and we can see there that adds up to 100 percent. I've done another data table here but instead of using the net profit margin I did before, I'm actually using my net profit. I do that and then over here I'm just multiplying it out. So based on the outcome multiplied by the probability and that, if I add all of those up, then it's going to give me my probability weighted, predicted outcome. We know that it's not going to be that, but based on the probability, the best case, base case, worst case; it gives me a little bit of comfort that this is the most likely outcome of my property development. That's it for data tables and probability.

How was that? Does that all make sense? I know I went through that really, really quickly. But you can certainly have a look at the files a little bit later. The other thing I wanted to go through with you is the Scenario Manager.

Thanks Melissa.

I'm not a big fan of Scenario Manager and I'm going to take a minute to go over this; I don't really like it very much. Basically, with this one, if we were to go in here, we've just got a very, very simple income, expenditure and savings. If I go in now too, I don't use this very much; if I go into Scenario Manager. It's together with the Goal Seek and it's together with the Data Table, all those really useful things. Scenario Manager's just not really great company. If I were to say, add and use Scenario and if I were to say, Scenario one and I were to change that one, and then that one. You know it will change that there, so I will say okay and that's Scenario one. Then I add a new Scenario and I will say Scenario two and let's say we were to have 18,000 and 2,500 or something like that. And, then we add another one and we call that Scenario three. There we go, so you have to manually go in there. Are you guys impressed? It's very manual, not my favourite process to have to go through that. We'll say okay and then we go, show. Did you see that? Blink and you'll miss it. If I say Scenario one, show; scenario two, show; scenario three, show. There we go. That was it. The thing I suppose I don't really like about this is, if I say close, and then I go into it.

Cole says, can you link the inputs to a cell? Yes, you can do formulas in there but these inputs really need to be hardcoded numbers and you need to go into; and now I go oh, scenario manager, there it is. There's all my scenarios. I would much rather see it in a drop down box or a data table; something that's really, really obvious and you can see what the modeller's done. I don't really want to have to go in here and say show like that. You can go in and show a summary I suppose. That's kind of cool, is being able to look at them all side by side, using a summary like that. Personally, I'd much rather use a data table.

Cole says; the values that you enter into a scenario manager, could you put those into a formula.

I'm not really sure. I think that they could. If I go in and edit it now. I don't believe that those can actually be a formula. As far as I understand they need to be hardcoded. It's possible. I've never probably liked the Scenario tool enough to check it out. But I don't think it's possible.

That's your summary there. In my opinion, I would much rather go with a data table, this one here, or using a drop down. I would probably go with a data validation drop down. That's in my opinion, the simplest and the easiest way of creating a scenario manager.

I will just go back to my PowerPoint just for a little bit of an overview. We've talked about each of those. The manual scenario analysis; the advantages of the manual is that it is easy build, it can handle a large number of inputs and outputs, so you can see all of the outputs at once. But the disadvantage is that you can only look at one at a time. So you say best case; all the numbers change; worst case, all the numbers change and you can't compare them side by side. If you want to be able to compare them side by side, you do a macro or you need to copy paste values or something like that. It's quite tricky to do them side by side. Of course, using a data table will allow you to see them side by side.

The advantages of a data table is that can look at multiple outcomes simultaneously; it's good for sensitivities, if you wanted to see how sensitive the output of a model is to one single variable. You say how much would my value change based on growth rates or something like that. You wanted to see how much that output changed as a result of the input changing. That's when a data table is really, really useful the disadvantage is that they are quite tricky to build. They are kind of an array formula so there are certain rules; you need to highlight the whole lot, if you're a beginner it's quite hard to get your head around it. The inputs and outputs do need to be on the same page. You can only have one or two variables and one output. If you want to look at multiple outputs you need to create multiple data tables. If you use them a lot, it can slow down your calculations so that's another disadvantage of using data tables.

I will go in now to talk about Goal Seek, that's something I haven't covered with you yet. I am just going to go through a case study with you. Here we've got a break even analysis. So that is, I guess, a break-even it's not really a scenario but I just wanted to very quickly show you how to do a break even using a Goal Seek. I will give a copy of this file as well. Goal Seek is really quite handy. Again, just going in to your What-If analysis. We've talked about the data table, we've talked about scenario manager, so just going into Goal Seek. If I say I want my profit to be zero, I need to know how many units do I need to produce so that my profit will be zero. If I set my profit to zero by changing the amount produced and okay. That will work backwards. It is a really, really powerful tool and you can have really complicated financial model but as long as you have a hardcoded number and a formula that links directly to that hardcoded number, it will all work well.

That's another type of sensitivity analysis that you can do using a Goal Seek as well; What-If analysis and I just quickly throw this in. Here's one I prepared earlier.

Nitin wants to know about using Goal Seek for IRR?

Yes, you certainly can use Goal Seek with an IRR, that would work in a very similar way. You would just calculate your IRR and then have an input and then work backwards such that your IRR is a certain amount. Yes, it is quite a handy tool for that.

I've created a macro, I will see if this is going to work. We will say break even and there we go. That's just using a macro. If you go into developer and I will give you guys this file and you can take it apart if you like. It's just really simple. All I did was basically record myself running a Goal Seek, because Goal Seek can be a little bit tricky trying to remember which one is the input, which one is the output. You can sometimes create a macro to do that, so I thought I would throw that one in for you. I will give you a copy of that also.

The problem with Scenario Analysis, basically, is that it provides a "snap shot" view. We know that it's always going to be wrong but does that make it meaningless? Not really. We know that the weather forecast is always going to be wrong but it does give us, it is helpful. We know it's not going to be exactly right but it does give us a bit of an indication in order to prepare. Is the base case really the most likely? It really depends, quite often we have very aggressive modellers that put really optimistic scenarios in. It just really depends and the scenarios and sensitivities are a bottom up, so you really need to know the drivers and get into the financial model in order to create scenarios and sensitivities.

Cole wants to know; do I mean optimistic modellers or do I mean optimistic managers?

Well sometimes they are the same thing but as a career financial modeller, I am always very careful to make sure that the assumptions and the inputs for my financial model are created and checked by someone else. I often work with entrepreneurs or people who are very, very optimistic about how their financial model or how the output is going to go and so they want to put in very, very bullish or very aggressive growth amounts. And, as a financial modeller, your responsibility is to make sure that the calculations are right and that the assumptions are logical. It does come down a little bit to the personality of either the modeller or the manager depending on the dynamics of the situation.

It is helpful to use a worst case scenario. We often use worst case scenario really just to see if absolutely everything that could go wrong, does go wrong; is it going to push us into default. Is it goign to cause problems? It can help us to prepare for the worst without being overly pessimistic or negative.

It is good to know what is the worst that can happen. We sometimes tend to focus on the upside but we do need to be prepared for the downside as well.

That's about it for the content of the scenario tools that I wanted to go over with you. I just wanted to share with you a free resource. If you've got a copy of my book, you probably already know about this. If you go to www.plumsolutions.com.au/book what you will find in there is a whole pile of downloadable resources. A lot of the stuff in the book is available on the blog. If you go to www.plumsolutions.com.au there's is some articles in there and lots and lots of stuff in there; lots of files. You can download all of the models that we used to create the book. Susan's just providing you the link there on the chat, so you can click straight into it if you want to. You can download all of that and have a look through. I will make available that property development model that I gave you. I will give you a copy of that. But, all of that is in there as well and the step by step instructions; they're not available on the blog, you will have to buy the book for that one unfortunately. All of that is available for you.

Before we go into the questions; are there any questions? I will just go back into the chat room. We've got just a couple of minutes before move into the prepared questions. Are there any other questions about the scenarios that we've been talking about? You guys, have been flicking me questions all the way through which is great. As I said, we've got lots of online training that's available for you. We've got the free Seven Day online course and for this very first webinar, I made this available to everybody and we got a tonne of questions which was great. I got a couple of really good questions that I am going to answer in a minute. If you would like an opportunity to put an Excel question, it doesn't need to be about scenarios, just anything with a problem that you're having with your work. If you become a member of our online financial modelling training community you will have an opportunity to submit some of your questions. And, if we don't get a chance to address them all in the webinar, then I will certainly get back to you a little bit later. So if there is nothing else you want to talk about.

Nitin wants to know about the plug for cash in a balance sheet in the financial model.

I don't know if I will be able to tackle that one today. That's a really common question. Basically we often, when we're wanting to create a balance sheet we have to know the amount of cash, the plug for cash. We often use a Goal Seek for that. That's a good tool to use. We often end up with a circular reference in balance sheets. That's something that we talk about in the advanced financial modelling course; being able to calculate how much cash we are going to need in the balance sheet is a common problem in financial modelling. Goal Seek can certainly help with that or with using macros to get around the circular references is another way of dealing with that problem.

We have a couple of questions that I would like to go over with you. I've got four questions, which hopefully we will get time to go over these.

Anish from Sydney; he is one of our online financial modelling attendees and he wants to know how to index match. That is actually something that's covered in the book so I'm going to go through an example with you. I am going to go into Excel now and I will make this available to you. Here we have got a good Australian example for you and what I'd like to do is to pick up staff amenities for Geelong and any ordinary person would just do it like this. I would go Staff Amenities and pick up Geelong, like that. But it's not a very smart way of doing it of course because if something were to change, if I were to change this to Sydney, for example, it's not going to automatically change. You could do a V-Lookup, an IF, you could do lots of different things but index match

Susan: Danielle?

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Danielle: Yes, yes.

Susan: Sorry, would you mind sharing your screen?

Danielle: Oh gosh, sorry. I knew I'd do something silly like that! Thank you Susan. Okay, how are we going? Is that better?

Susan: Looking good.

Danielle: Fantastic, sorry about that. I'm now in Excel and what we've got here is a list of Australian cities and if I were to link that through to there and if I were to change that to Sydney for example, you can see that the number doesn't change. What I'm going to do now is create an index match. When you get really comfortable with doing an index match you can just type the whole thing out and it's easy. But I find it much easier and I'm going to take you through doing three different formulas; it's a nested formula, three in one. The step by step instructions are on page 153 of the book. I am going to take you through how to do it right now.

Go into Index, open bracket, Ctrl A brings up my function wizard and I am going to choose the first one here. I am going to say Array; you always start from A1 for your entire array like that. I'm going to hard code the numbers now. The row number is five, my fifth one and my column is six, sixth one across. You can see there, that's given me the correct number but because I've used hard coded numbers and if you guys have attended any of my courses, you'll know that I'm not a big fan of using hard coded numbers, they are not very smart in financial modelling. What I'm going to do now is create a Match function which is going to replace those hard coded numbers. I am going to go in and use a Match, Ctrl A again which brings up my function wizard. You don't have to use the function wizard but I do just find it easier. You look up value is the word "staff amenities". My array again starts from A1 and goes all the way down to here and you always need to put a zero at the end. That's going to give you the position of the word "staff amenities". What the match function does is it says here's the word "staff amenities", look down that column here and tell me what position does it hold and the answer is five. That's the first part of it.

The second part now, I need to pick up Geelong. I need to look all the way across here and find out what position does the word "Geelong" hold? Another Match, Ctrl A, Geelong is my look up value, my array is A1 all the way across the top here and again it's match type zero. What we've got now is three different formulas. We've got index with a hardcoded five and a hardcoded six. We've now got a match which returns my five and a match which returns my six. If you're watching the video, you can just pause and try this out for yourself.

What I'm going to do now is Ctrl C and then Esc. Highlight everything except for the equals, Ctrl C and Esc. Go into your index, Ctrl V and Enter. So that bit's working and then do exactly the same thing with the Match. Ctrl C, Esc, go to your six and Ctrl V and Enter. There we go. Get rid of those and we have a fairly long and complicated formula but it works really, really well. It's a very common and most useful function for many financial modellers. And, the great thing here is that if I were to change that to Sydney, that will automatically change. What if I were to change it to Sydney space. It doesn't work, so of course this is where, this data validation that we were talking about earlier comes in. So, it's much, much better practice if I were to restrict the entries and say, your cities need to be one of those. I can change that and then it will automatically change and I can do exactly the same thing with this one here. I can say List, all the way down, okay, so I can automatically change that. Okay, so Anish I don't know if you are on the call today but I hope that answers your question.

Let's go onto the next one. Katerina, she's in Nairobi in Kenya and she wants to know about how do you VLOOKUP text?

VLOOKUP text is really pretty much the same as how you VLOOKUP anything else. I'm just going to show you a really, really simple example of VLOOKUP. This is just happens to be in the book. This is using oranges as an example. I am going to go in and do a really straight up VLOOKUP. Oranges is my criteria, highlight the whole lot like that as my array. My column index number is a two because it's the second column across and then it's going to be, in this case, it's going to be a zero. If you don't put a zero, sometimes it works and sometimes it doesn't. So I think what Katerina's asking is that if you were to leave that as a blank, sometimes it works and sometimes it doesn't. If I were to say orangutans or something like it will probably work. Let's see here if I were to change to Pears, okay yeah that works. If I were to say bananas, yeah that will work. Apples; yeah that does give me the right amount. What if I were to say apple, yeah so that doesn't there. This is where is actually really important that we put that zero especially, in fact, when your dealing with text or just about anything. There's really nothing different that you need to think about when you're using a VLOOKUP whether you looking at a number or whether you are looking at a date or at text; a VLOOKUP works in a really similar way. It's just very important that you put that zero or you can also put a false; zero as a false or a one is a true. So I hope that answers your question there, Katerina? Do drop me a line if there is more you'd like to ask me about that.

We will go on now to the next question. Kirill in Moscow, he's got a really good one; the different versions of Excel that are available. As you guys probably know Excel is my world, it's what I live and breathe. I get really excited when a new version of Excel comes out. We fairly recently got the new Excel 2016, that's just come out, which you can see I've been using. It's fantastic. It's got a lot of new features which are great.

Here's a bit of an overview of the different types; a bit of history of Excel. This was a big break here when 2007 came out. 2010, we probably find most people, in the training that I do, I probably find that most people are using 2010 and 13 still. 2016's been out since, well it's been quite widely available since the beginning of this year but we're still finding a lot of people are not using it yet. You do need to consider the XLSX that is a new file type and XLS is the old file type and we've got 2016 as well. That was the big break and if you're using a Mac those are the compatible or the similar versions using a Mac. So those are the different versions of Excel that we have available.

Nitin has a question; let me just go back as I can't read his question. Actually Susan are you able to? I can't actually read the whole of his question there. I might just have to go back.

Susan: Yeah, Nitin has just asked; do other spreadsheet programs such as LibreOffice offer comparable functionalities with Excel?

Danielle: They can. Probably the one that's got the most traction is GoogleDocs. That's probably the one that's most businesses are using. A lot of things are missing. Excel's by far got the most functionality. There are lots of others, like there's Apple Mac Numbers. You know, if all you want is a calculator then they will certainly do it but by far, all the functionality you really need to be using Excel.

Some of the new features. I know there is a tonne more features than this but here are the ones that I think, for financial modelling anyway, are the most important. In Excel 2010 they brought out Sparklines, Slicer and PowerPivot; so those are absolute game changers. They were absolutely fantastic when they came out. If you're using anything prior to 2010, I'm sorry you won't be able to

use any of those. Those are fantastic. If you haven't used Sparklines, Slicer or PowerPivot, I definitely recommend you check them out and see what you're missing out on.

If you've upgraded to 2013, you will have the Inbuilt Data Model. Now Data Model is kind of with PowerPivot. It wasn't inbuilt in 2010. If you're looking at creating, you know, quite often the data that we want to pull from a Pivot Table might be in multiple sources, two different tabs. You can actually match and create relationships within Pivot Tables without going into the full PowerPivot. That's what the Data Model is really, really handy for. They've got Combo Charts, not a big deal but it does make it really easy. I'm quite a big fan of having two separate axes; a line chart and a column chart on the same chart. That is standard in 2013. It was quite a mission creating one of those in 2010 or earlier. And, also Flash Fill which is pretty cool. I show people this stuff in 2016, it's just that a lot of people are not using it yet but if you are using 2016, you've gone, oh I'm so excited that they've created this Waterfall Chart, now in 2016. There are lots of Hierarchy charts like tree maps. If you do a lot of charting, check it out; sunburst and tree maps are fantastic and make it really, really easy to create those in Excel 2016. Power Query, this has been around since 2010. It's now called Get and Transform but we still tend to call it Power Query. Power Query's fantastic; we do cover that very briefly in our Data Analysis and Dashboards course. It's a great way of cleaning up your data and of course there is Forecast Sheet, which is when you are doing regression analysis and using the Forecast function. It's really, really easy.

David wants to know; in 2013 what menu the Data Model is in? Is that what you are asking David? The Data Model?

It's actually there, just when you go into create a pivot table, if you're using 2013 only, not if you're using a previous version. Next time you go in and create a pivot table, you'll notice that there's just a little box and it says "add to data model" and if you tick that, that will actually grab your data, put it into the data model and then when you go into your pivot table; I haven't got an example to show you right now, but if you go into your fields, you will be able to go in and look at the relationships there. Have a bit of a play around with that. That's really, really handy.

David says; so is it similar to Power Query?

It's not dissimilar. I suppose you use for a different purpose. Power Query's used for cleaning up your data. Data Model is used for storing and analysing and looking at relationships within your data.

The last question we've got is from Morley in Perth. He says, "is it possible to protect an Excel spreadsheet that cannot be cracked?"

Unfortunately, I don't think so. It is possible that you can, there is always programs out there that can create one but basically protection in Excel is supposed to be a deterrent. It's not supposed to be something that is completely can be relied on. If you Google "password cracker", it's pretty easy to get into somebody's spreadsheet. If you are creating a spreadsheet with a password, I would just treat it like a deterrent rather than completely non-crackable. I hope that answers your question, Morley.

As you guys probably know, the methods of protecting your model; you can either protect the file itself, so put a password on it. You can protect the structure of the model or you can lock the cells and protect the sheet. We do go into that. That's also available in the book and there is a whole section on this in the Introduction to Financial Modelling online course and we do quite a bit of this stuff in the intermediate course as well. Which brings me into the online training that we have available.

If you liked what we've done; if you signed up for the Seven Day course you will get a bit of an idea of the quality.

Nitin wants to know if the book is on Amazon?

Yes, it certainly is. Probably the quickest and easiest way of getting one is to just order it one Amazon. Of course, you can come on an online training course or the face to face workshops.

Why don't I talk about the face to face workshops first of all? Those are in Sydney, Melbourne and Brisbane. I know a lot of you guys are Australian based, so if you can it to one of the workshops, I'd love to see you there. Those are the ones that we have available: Data Analysis and Dashboard Reporting in Excel, Budgeting and Forecasting, Financial Modelling or Advanced Financial Modelling. We are giving a coupon code. It's going to be able, I think, until the end of April, the 30th of April. I think that is next Saturday it's going to be available. So, if you go into either book a workshop or book on the online bundle training course, just type in the word "scenario" and you will get $100 off, so that's a great deal. That's for the workshops in Sydney, Melbourne and Brisbane.

Susan, when is our next training coming up? When is our next one?

Susan: Hello, I'm here. Our next workshop is coming up in Melbourne on the 31st May. Then we've got Sydney on the 6th June and then we've got Brisbane from July which I think is the start of July.

Danielle: Yes, it's the first week of July.

Susan: Yeah, that's right.

Danielle: Yeah, great. Thanks for that. You can, from now until the end of next week, you can get $100 off those workshops. If you can't make it to the face to face workshops, I'd love to see you on an online training course. Those are on demand videos. Each video is quite short. We've actually updated the Intermediate Financial Modelling Course for Excel 2016 and we had so much fun recording that because we went to Fox Studios and we hired out the studios for the whole day. So the quality of the videos is really, really good. We've edited it right down, so that the videos are actually quite short. I think the longest one goes for about ten minutes, so they are all in little segments and there's about thirty or thirty-five videos in the whole course. Each of these courses is in place of a full day of training. Most people say, I think they say, it takes like five or six hours to get through each of those. Because you need to pause it, you need to create your own, build your own financial model as part of the course. The whole bundle is $525 Australian dollars. If you are outside of Australia, you don't need to worry about the GST. and I think that translates to just over 400 US dollars, so the Australian dollar is quite low at the moment and that does include a copy of the book and of course you'll get $100 off until the end of May if you buy all three courses.

You get twelve weeks' access. As you're going through the courses you need to watch the videos, you need to submit some quiz questions and you need to submit your financial model. So you can sign up for those today.

That's pretty much it for our webinar. I hope you guys enjoyed it. I think we managed to get through without too many technical problems besides me forgetting to share my screen. But, other than that, I think we went quite well. I'd love to see you in another webinar. I hope you enjoyed it. Please let me know what you thought. I know I covered quite a lot today. In a future webinar, I might, whether you think I need to go a bit faster or a bit slower or what you liked or if you have got any suggestions for

future topics. This was the first one, I just thought we'd try it out and see how it went. I hope you've enjoyed it and was there anything else that you wanted to talk about Susan? I think we're going to make the recording available and send through the files to everybody.

Susan: Yes, we'll get that organised either today or tomorrow and get that sent through to you. If anybody has any suggestions at all, you can email us through. I've just popped our email address on there as well.

Danielle: Oh, yes I can see that.

Susan: You can send us any suggestions that you have.

Danielle: Okay, well thank you so much guys. I'll catch you next time. See you later, bye bye.

End of Transcript