

Creating a what-if .

创建假设脚本分析模型

Hello and welcome. In this video I am gonna show to how to create a what –if model in Xcelsius from scratch. What scenarios help to determine where the certain fact value of KPI need to be in order to achieve desire result or meet certain targets.

欢迎大家。在这个视屏中，我将要展示在 Xcelsius 中如何从头创建一个假设脚本分析模型。这种模型可用来帮助确定某些 KPI 变量值，以达到想要的结果或者目标。

What scenario can be used is to build at work and personally also. For example, if you want to exam how different matters of personal expending or saving money will affect your finances in the future, like buying a new car may seem, you know, unaffordable now, however, if you plug in various factors like income and expenses into the model or into scenario, it can review some hidden facts whether you will be able to pay off during the course of 36 months or 60 month or whatever the time is long. So in this case I am gonna use a example of a product where whether it can achieve the profit level set by certain company, are not based on whatever its model.

该模型可以用于工作场合，也适于个人用途。比如说，如果你想要检验一个人的花销和节省行为会怎样影响个人未来的经济状况，比如说现在看上去你似乎买得起一辆新车，可是，当你把你的收入和花费这些因素倒入到模型，它就会显示出一些隐藏因素，来判断你是否可以在 36 个月或者 60 个月或无论时间有多长之内还清贷款。在此，我以一个产品为例，基于假设脚本分析模型，看它是否可以实现某些公司设定的利润水平。

Before jumping into the model, let us examine underline excel data, let us quickly switch to spread sheet only mode. What we have here is, if you observe the center I have forecasted numbers for Sales price /unit, Cost price/unit, quantity, profits%. If you observe these are all forecast hard-core numbers. Below I have variables for Cost, Quality, profits%. So these are going to be my factors which will affect my ultimate key performance indicator which is profit. Below profit, I have sales price, cost price, quantity, profits %. The cost price, quantity, profits % here are calculated based on variables here.

在我们进入模型之前，我们先检查一下下面的 Excel 数据，我们快速的切换到“ Spreadsheet Only”模式，你在中间可以看到我有预测数字，像每单位的销售价格，每单位的成本价格，数量和利润百分比。下面则是变量：成本，数量和利润百分比。所以这些就是将会影响我的主要业绩也就是利润的因素。在利润下面，还有每单位的销售价格，每单位的成本价格，数量和利润百分比。而成本，价格和利润百分比都是基于下面这些变量，以及预测数字得来的。

And the forecast numbers. And the sale price calculate from the sale price/unit and quantity, the “what if” quantity. The profit is calculated based on sales price minus cost price. For the entire quantity of the product, for all 12 months in a year, and also I have certain targets to meet, for every month and through all the year. So let’s go ahead and quickly create a “what if” model. We gonna use a simple combination chart, so let us click on charts, go to Combination chart, drag and drop a Combination chart. For the first series, let’s take the chart title off, subtitle off, and add series.

销售价格是从每单位的销售价格和数量计算出的（数量是“假设”数量）。利润则是由销售价格减去成本价格得出的。对于产品的总数量，在一年的 12 个月中。对于每个月，我还有一些特定目标要完成。现在我们就快速新建一个假设脚本分析模型。我们使用的是组合图，点击“图表”，“组合图”，然后拖拽一个组合图。对于第一个序列，我们去掉标题名和副标题，增加一个序列。

For the first series, let’s give it name of profit, for the values, I give the calculated profit value, the “what if” value. And the labels as the month name. So quickly I have my forecast numbers here. Let us also map the target; this is going to be a line chart, so I give the name of target, and value as the target values, so if you observe none of my forecast numbers are meeting the target, so let us quickly do a quick formatting of the chart, so it looks better. So there you go, the chart format now, so let us go and create few sliders, for our variables, which is gonna be cost price, quantity and profit, let us go to components, under single values, selected horizontal sliders, drag them onto canvas, let’s quickly set the properties ,give title of cost price. Let me fix the pan here.

第一个序列中，我们起名为利润，对于价值，我给出计算好的利润值，就是“假设”值，给标签起月的名字。我现在有了预测的数字，我们来画目标，它是一个折线图，我给它起名为“目标”，价值起名为“目标值”。你会发现我的预测数字都没有满足目标，我们先快速的做一些格式调整，让它更好看一些。我们现在就我们的变量，也就是成本，数量和利润创建一些滑块。打开“组件”，在“单值”下，选择“水平滑块”，把它们拖到画布界面上。迅速设置一下属性，给成本命名。

Give the data as percentage, the change. I already have the minimum, maximum values for each variable. So the minimum limit for cost price, maximum limit, and also if I switch to behavior, I increment by 1 percent. So similarly, you can create the rest of the slides. For now let’s quickly change the position of title to left, so I have my first variable slider. Similarly, create the rest of variable quantity of profit.

给出数据的百分比。我已经有了每个变量的最小值和最大值。然后给出成本的最小值和最大值限制。我现在切换到“行为”，我增加百分之一。相同的，你可以这样设置其他的滑块。我们现在把标题的位置改到左边，这样我有了第一个变量的滑块。用同样的方式为其他两个变量，数量和利润，创建滑块。

So there you go, I have the slider for all three variables, so let's go and quickly preview the model and see what happens, so at this moment, you can see there is no change in my forecast variables, cost, quantity and profit. And the forecast numbers remain the same and don't meet the targets; however for me, in order to meet the targets, what factors can affect forecast number is what I need to do. So what if I reduce the cost price by 0.5 percent, if you observe my forecast number went up a little, but my threshold for my cost price is only 0.5 percent, so I keep it 0.5 percent.

看，现在我有三个变量的滑块了，我们预览模型。此时，现在我预测的变量：成本，数量和利润没有任何变化。此时预测数字没变化而且没有满足目标。为了达到目标，我需要的是可以改变预测数目的因素。我现在减少 0.5% 的成本，你会看到我的预测数目上升了一点，我继续保持成本的 0.5%。

I can leverage the quantity what if I increase my quantity by 2 percent, if you observe, it's slowly increasing, my threshold is 4 percent, so I leave it for 4 percent. At same time, profit percentage let's increase by 5 percent and 10 percent, once I increase by 10 percent, you see all amounts meeting the targets. So what we've just done here is we have set the variables factors which affect my ultimate key performance which is profit here. So at 0.5% of cost price, there is a reduction of 0.5 percent in cost price, increase 4 percent in quantity and 10 percent in profit percentage will meet the target for the year.

我可以利用我的数量，如果我增加 2 个百分点的数量，你会看到，它缓慢增加。同时，我们增加 5%，10% 的利润呢百分比，一旦我加到了百分之 10，你看见所有的数量都达到了目标。所以我们要做的就是设置变量因素，它们会自动影响利润的。所以在 0.5% 利润时，成本呢会降价 0.5%，数量会增加 4%，利润率增加 10%，这样就达到了目标。

So this is how you can design a what-if models, what exactly happens when I changing the sliders, it's changing the values in my spread sheet, here, so I color this in yellow, so when the values change, my calculation for cost, quantity and profit change here, so the profit numbers change. So when the profit numbers change, my bars are changing on the chart and trying to meet the target, so this is how you can use single value component-charts, etc. Change the values in the underline spreadsheet and always create a "what if" model for variety of scenarios. You can also use for personal use, for your personal finance, if you want to find how a house, a car loan, or something.

这就是你如何设计一个假设脚本分析模型，当我改变我的数值时，电子表格的数值也变化。我给这些单元格涂成黄色当这些数值变化时，我的成本，数量和利润的计算也在变化，利润额也在变化。当利润额变化时，图上的柱子也在变化，看看如何才能满足目标。这就是如何使用单值组件图表，通过改变变量值，给不同的变量创造假设模型。这种模型可用于多种场合，也可用于个人理财用，比如说买房、还贷等。谢谢观看。