FREE TUTORIAL

# EXCEL CAMERA TOOL – DYNAMIC WATCH IN FINANCIAL MODELS

## Excel Camera Tool Introduction

**When developing something as complex as a Financial Model it is often useful to be able to 'watch' a part of the model, such as the Balance Sheet, Executive Summary or key Financial Ratios whilst making changes in another worksheet. In this Tutorial we will introduce features that enable live dynamic watch features in Excel.**

Another example might be the wish to import debt sizing criteria or a plot into the section of the Inputs worksheet that changes the debt inputs. The advantage of being able to view what is happening in other parts of the model include an improved understanding of the financial dynamics and also picking up errors or 'oddities' as soon as they arise.

If used sparingly it can be used to create some very useful 'panel' based output.

## Creating a Live Watch Window

Excel has a rarely used feature called the 'Camera Tool' which essentially creates a wormhole from one part of a model to the other. A live link can be established between one part of the model and the other without using traditional cell based formula.

### Where is the Camera Tool?

This is not a standard feature – it needs to be activated as follows:

- View
- Toolbars
- Customize
- Commands
- Tools

Then scroll down and select the Camera Tool  and move up into an existing toolbar. To take the 'live snapshot', select the area you would like to view, click the  icon, then locate it in the selected worksheet

"If you want to learn more ways of working smarter in Excel then you should attend our Project Finance Modelling (A) course."

Nick Crawley, Managing Director
Navigator Project Finance

*Screenshot #1*

| | | |
|---|---|---|
| Debt Amount | USD M | 200.00 |
| Repayment Start | Start of Op | 01-Jan-08 |
| Repaid Over | | 5.00 Yr(s) |
| Final Maturity | | 31-Dec-12 |
| Base Lending Rate | % p.a. | 6.50% |
| Margin | % p.a. | 2.00% |
| Minimum DSCR Covenant | x | 1.30 x |

"Debt Account" Watch Window

| 30-Jun-08 | 31-Dec-08 | 30-Jun-09 | 31-Dec-09 | 30-Jun-10 | 31-Dec-10 | 30-Jun-11 | 31-Dec-11 | 30-Jun-12 | 31-Dec-12 | 30-Jun-13 |
|---|---|---|---|---|---|---|---|---|---|---|
| 200.00 | 183.46 | 166.26 | 148.30 | 129.64 | 110.16 | 89.90 | 68.77 | 46.78 | 23.87 | - |
| (16.54) | (17.20) | (17.96) | (18.66) | (19.48) | (20.26) | (21.13) | (21.99) | (22.92) | (23.87) | - |
| 183.46 | 166.26 | 148.30 | 129.64 | 110.16 | 89.90 | 68.77 | 46.78 | 23.87 | - | - |

"DSCR" Watch Window

| 30-Jun-08 | 31-Dec-08 | 30-Jun-09 | 31-Dec-09 | 30-Jun-10 | 31-Dec-10 | 30-Jun-11 | 31-Dec-11 | 30-Jun-12 | 31-Dec-12 | 30-Jun-13 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.41 x | 1.37 x | 1.31 x | 1.65 x | 1.81 x | 1.70 x | 1.53 x | 1.45 x | 1.41 x | 1.37 x | 0.00 x |

*Screenshot #2*

| | | |
|---|---|---|
| Debt Amount | USD M | 200.00 |
| Repayment Start | Start of Op | 01-Jan-08 |
| Repaid Over | | 4.50 Yr(s) |
| Final Maturity | | 30-Jun-12 |
| Base Lending Rate | % p.a. | 6.50% |
| Margin | % p.a. | 2.00% |
| Minimum DSCR Covenant | x | 1.30 x |

"Debt Account" Watch Window

| 30-Jun-08 | 31-Dec-08 | 30-Jun-09 | 31-Dec-09 | 30-Jun-10 | 31-Dec-10 | 30-Jun-11 | 31-Dec-11 | 30-Jun-12 | 31-Dec-12 | 30-Jun-13 |
|---|---|---|---|---|---|---|---|---|---|---|
| 200.00 | 181.22 | 161.69 | 141.30 | 120.10 | 97.98 | 74.98 | 50.99 | 26.02 | - | - |
| (18.78) | (19.53) | (20.39) | (21.20) | (22.12) | (23.01) | (23.99) | (24.97) | (26.02) | - | - |
| 181.22 | 161.69 | 141.30 | 120.10 | 97.98 | 74.98 | 50.99 | 26.02 | - | - | - |

"DSCR" Watch Window

| 30-Jun-08 | 31-Dec-08 | 30-Jun-09 | 31-Dec-09 | 30-Jun-10 | 31-Dec-10 | 30-Jun-11 | 31-Dec-11 | 30-Jun-12 | 31-Dec-12 | 30-Jun-13 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.29 x | 1.25 x | 1.20 x | 1.51 x | 1.66 x | 1.56 x | 1.40 x | 1.33 x | 1.29 x | 0.00 x | 0.00 x |

### Example

An example as shown in Screenshot #1 above shows a 'live snapshot' of the debt facility and the DSCR calculation, and located it amongst the debt inputs.

As the Debt is manipulated the user can readily see how the debt repayment date and the DSCR are affected. As shown in the Screenshot #2, if the repayment period is changed from 5.0 years to 4.5 years, then DSCR falls below the Minimum DSCR covenant of 1.30x.

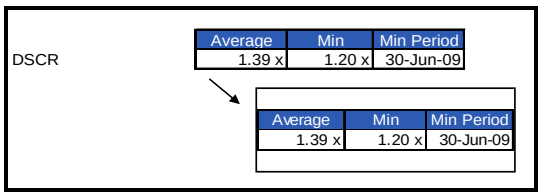
Soft-wired checks could also be used to pick this kind of information up but the Camera Tool is a unique way of very quickly adding some very neat visual assistance into a model.

Public Courses by Navigator Project Finance

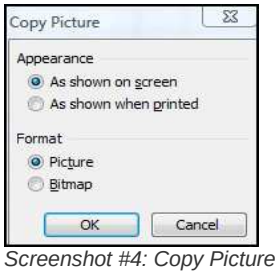
- Project Finance Modelling (A)
- Project Finance Modelling (B)
- Debt Modelling Masterclass
- VBA for Financiers

## Taking a Still Snapshot

In addition to the Camera Tool one can also capture images of an Excel range by holding down the SHIFT key and then selecting the 'Edit' menu. You will notice that the options have changed from normal. Select the 'Copy Picture' option and you will then create a drawing object of the area that has been selected. This is useful for creating reports and also overlaying images and text over live sections.




*Screenshot #3: Taking a still snapshot*




*Screenshot #4: Copy Picture in Excel*

## Conclusion

When applied with moderation, dynamic watches can be a very useful feature, particularly in the 'model build' or 'debt sizing' phases. Watches can also shorten and bring greater confidence into an error checking process.

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## Things to watch out for

- The Camera Tool has a number of well known bugs which makes it less useful in a live transaction model where stability is critical, however as an ad-hoc analysis tool it can be very powerful.
- Using the camera tool on an area generated by a camera tool can create 'circular visualization patterns' similar to a video camera put in front of a TV where the signal from the video camera Is displayed. This may be an interesting feature, but is very computationally heavy and should always be avoided.
- Using the Camera Tool to regenerate graphs generally does not work too well. Unfortunately Microsoft didn't spend too much time testing this feature before releasing it which is probably why it is not included in any of the standard toolbars

This is a Free Tutorial from Navigator Project Finance. If you have any feedback or suggestions for future developments we would like to hear from you!

The team at Navigator Project Finance
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Navigator Project Finance Pty Ltd P +61 2 9229 7400 E enquiry@navigatorPF.com