

# THOMSON REUTERS EIKON

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## Introduction to Eikon Excel



## Document History

Version	Date	Authors	Changes
1.	15 July 2016	Chua Rui Ting Vincent Chia	First Issue for Eikon version 4.x

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# THOMSON REUTERS EIKON FOR MICROSOFT OFFICE

## QUICK REFERENCE CARD | FREQUENTLY USED FORMULAS

<b>Financial Information</b>				<b>Consensus Estimates</b>	
Revenue	TR.Revenue	EV	TR.EV	Average Broker Rec	TR.RecMean, TR.RecLabel
COGS	TR.CostofRevenueTotal	Market Cap	TR.CompanyMarketCap	Price Target	TR.PriceTargetMeanEst
Depreciation	TR.Depreciation	Shares Out	TR.SharesOutstanding	CAPEX	TR.CAPEXMean
Gross Income	TR.GrossProfit	EPS	TR.BasicNormalizedEps	Operating Income	TR.OPRMeanEstimate
S, G & A	TR.SGandAExp	Fully Diluted EPS	TR.DilutedNormalizedEps	Revenue Estimate	TR.RevenueMeanEstimate
Total operating exp	TR.TotalOperatingExpense	BVPS	TR.BookValuePerShare	EBITDA Estimate	TR.EBITDAMean
Operating Income	TR.OperatingIncome	CFPS	TR.CFPSActValue	EBIT Estimate	TR.EBITMean
Interest Income	TR.NetInterestIncome	FCF Per Share	TR.FCFPSActValue	Net Income Estimate	TR.NetIncomeMeanEstimate
EBIT	TR.EBIT	DPS	TR.DpsCommonStock	CFPS Estimate	TR.CFPSMean
EBITDA	TR.EBITDA	R&D	TR.ResearchAndDevelopment	EPS	TR.EPSMeanEstimate
Pretax Income	TR.NetIncomeBeforeTaxes	Income Tax %	TR.IncomeTaxRatePct	DPS	TR.DPSMean
Net Income	TR.NetIncome	Dep & Amortization	TR.DepreciationAmort	ROE	TR.ROEMean
Total Assets	TR.TotalAssets	Cash & Equivalents	TR.CashAndSTInvestments	ROA	TR.ROAMean
Accounts Payable	TR.AccountsPayable	Receivables Total net	TR.TotalReceivablesNet	<b>Valuation (historical)</b>	
Current Liabilities	TR.CurrentLiabilities	Inventories	TR.Inventories	EV/ Total Revenue	TR.EVtoSales
Minority Interest	TR.MinorityInterestBSSmt	Current Assets	TR.CurrentAssets	EV/EBITDA	TR.EVtoEBITDA
Preferred Stock Net	TR.PreferredStockNet	Total Debt	TR.TotalDebt	EV/EBIT	TR.EVtoEBIT
Total Liab & Equity	TR.TtlLiabShareholderEqty	Net Debt	TR.NetDebt	P/BVPS	TR.PriceToBVPerShare
<b>Fixed Income</b>		<b>Market Information</b>		P/ TangBVPS	TR.PriceToTangBVPerShare
Issuer Name	TR.FilssuerName	RIC	TR.RIC	P/E	TR.PE
Maturity Date	TR.FiMaturityDate	Closing Price	TR.PriceClose	<b>Valuation (forecast)</b>	
Current Yield	TR.FiCurrentYield	Opening Price	TR.PriceOpen	EV/Fwd Total Rev	TR.EV/TR.RevenueMeanEstimate
Current Price	TR.FiPrice	Intra Day High	TR.PriceHigh	Fwd EV/EBITDA	TR.EV/TR.EBITDAMean
Principal Amount	TR.FiFacelssuedTotal	Intra Day Low	TR.PriceLow	Fwd EV EBIT	TR.EV/TR.EBITMean
<b>Credit Rating</b>		Trading Volume	TR.Volume	Foward P/ EPS	TR.PtoEPSMeanEst
Rating	TR.GR.Rating	Dividend Yield	TR.DividendYield	PEG Ratio	TR.PEG
Moodys Rating	TR.FiMoodysRating	BETA 5 Year	TR.BetaFiveYear	P/ Foward CFPS	TR.PtoCPSMeanEst
S&P Rating	TR.FiSPRating	Shares Outstanding	TR.SharesOutstanding	<b>Valuation SmartEstimates</b>	
Fitch Rating	TR.FiFichsRating	Headquarters	TR.HeadquartersRegion	Fwd EV/ Revenue	TR.FwdEVtoREVSmartEst
		Industry	TR.TRBCIndustry	Fwd EV/ EBIT	TR.FwdEVtoEBISmartEst
		Business Description	TR.BusinessSummary	Fwd EV/ EBITDA	TR.FwdEVtoEBTSmartEst
				Fwd P/ EPS	TR.FwdPtoEPSSmartEst

# Introduction to Eikon Excel

<b>Date and Time functions</b> =DfAddWD                      Adds the number of working days to a date =DfAddMonths                Adds the number of months to a date =DfAddYears                  Adds a number of years to a date =RTNow                         Retrieves the current system time =RTToday                      Retrieves the current system date		} Syntax: =DfAddMonths (Calendars, CalcDate, NbMonths, DfMode) e.g. =DfAddWD("USA","30JUN05",2" Function Output: July 5th 2005 (July 4th 2005 is a non-working day in the US, hence the next working day is retrieved)																														
<b>Financial Period Syntax</b> <table border="0"> <tr> <td><i>Relative Periods</i></td> <td rowspan="5">                     } (Replace n with 0 for last reported period, -1 for previous period and 1 for next period)                 </td> <td><b>Period Argument Codes</b></td> <td></td> </tr> <tr> <td>FY[n] Fiscal Year</td> <td>FY0 Last Fiscal Year</td> <td></td> </tr> <tr> <td>FQ[n] Fiscal Quarter</td> <td>FY1 Next Fiscal Year</td> <td></td> </tr> <tr> <td>FI[n] Fiscal Interim</td> <td>FY-1 Previous Fiscal Year</td> <td></td> </tr> <tr> <td>FS[n] Fiscal Semi-Annual</td> <td>FQ0 Last Fiscal Quarter</td> <td></td> </tr> <tr> <td>CY[n] Calendar Year</td> <td>FI Fiscal Interim</td> <td></td> </tr> <tr> <td></td> <td>FS Fiscal Semi-Annual</td> <td></td> </tr> <tr> <td></td> <td>CY Calendar Year</td> <td></td> </tr> <tr> <td></td> <td>LTM Last Twelve Months</td> <td></td> </tr> <tr> <td></td> <td>NTM Next Twelve Months</td> <td></td> </tr> </table> <i>Absolute Periods</i> FY[YYYY] e.g. FY2014, FY2012 CY[YYYY] e.g. CY2013 [q]FQ[YYYY] Fiscal Year/quarter e.g. 3FQ2013 [s]FS[YYYY] Fiscal Semi-Annual e.g. 2FS2013			<i>Relative Periods</i>	} (Replace n with 0 for last reported period, -1 for previous period and 1 for next period)	<b>Period Argument Codes</b>		FY[n] Fiscal Year	FY0 Last Fiscal Year		FQ[n] Fiscal Quarter	FY1 Next Fiscal Year		FI[n] Fiscal Interim	FY-1 Previous Fiscal Year		FS[n] Fiscal Semi-Annual	FQ0 Last Fiscal Quarter		CY[n] Calendar Year	FI Fiscal Interim			FS Fiscal Semi-Annual			CY Calendar Year			LTM Last Twelve Months			NTM Next Twelve Months
<i>Relative Periods</i>	} (Replace n with 0 for last reported period, -1 for previous period and 1 for next period)	<b>Period Argument Codes</b>																														
FY[n] Fiscal Year		FY0 Last Fiscal Year																														
FQ[n] Fiscal Quarter		FY1 Next Fiscal Year																														
FI[n] Fiscal Interim		FY-1 Previous Fiscal Year																														
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CY[n] Calendar Year	FI Fiscal Interim																															
	FS Fiscal Semi-Annual																															
	CY Calendar Year																															
	LTM Last Twelve Months																															
	NTM Next Twelve Months																															
<b>NULL: Populating empty cells</b> NULL:ZERO                    displays 0 NULL:NA                        displays #NA NULL:NAND                    displays #N/A ND NULL:SKIP                    skips line if no data for at least one instrument NULL:PREVIOUS              duplicates value of the previous data point NULL:NEXT                    duplicates value of the following data point		<b>Scale Parameter</b> 0    No Scaling 3    Scale the value into thousands 6    Scale the value into millions 9    Scale the value into billions	<b>Chain Instruments</b> e.g. 0#.DJA, 0#.FTSE, 0#.STOXX, 0#.NDX, 0#.N225 (.FTSE is the RIC of FTSE100 index, while 0#.FTSE gives all the RICs for the index constituents)																													
<b>Eikon Formulae Shortcuts</b> =RIC            Identifier lookup =DI             Data Item lookup =ANS           Answers your question =TR             Formula builder		} CTRL - Selects top hit TAB - Moves to next argument Enter - Commits function Esc - Exits out of assistant	<b>Useful ISO Codes</b> Australian Dollar    AUD British Pound        GBP Canadian Dollar     CAD Chinese Yuan        CNY Danish Kroner        DKK Euro                    EUR Hong Kong Dollar    HKD Japanese Yen        JPY Swedish Kronor      SEK Swiss Franc           CHF US Dollar             USD																													
<b>Basic Eikon Formula</b> TR( <b>Instrument(s)</b> , <b>Data Item(s)</b> , <b>Parameters(s)</b> ) "= TR("MSFT.O","TR.TotalRevenue","Period=FY0") displays <b>Microsoft's most recent fiscal year total revenue.</b>																																
<b>Advanced Eikon Formula</b> TR( <b>Instrument(s)</b> , <b>Data Item(s)</b> , <b>Parameters(s)</b> , <b>Destination cell</b> , <b>Cell references</b> ) "= TR("MSFT.O","TR.Revenue","Period=#1 Scale=#2 Cum=#3 CH=Fd","\$A\$1,B1,C1,D1) displays : <b>Microsoft's Revenue for the period in cell B1, scaled to the number in C1 converted to currency in D1, with column header. The output is shown in cell \$A\$1</b>																																

## 1. Basics to Eikon Excel

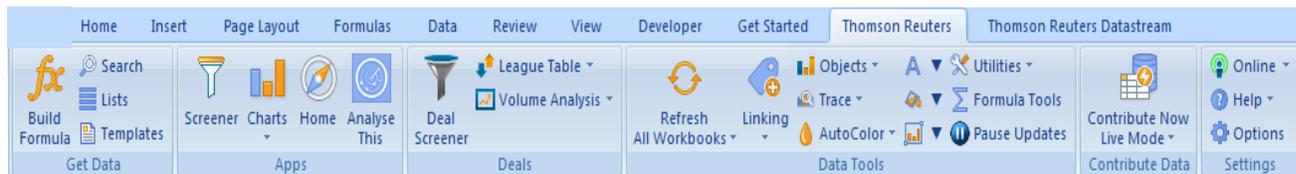
### Overview

In order to access Eikon Excel, one should open the Thomson Reuters - Microsoft Excel application and do the following.

In the Thomson Reuters tab, press on the  button to log in. Ensure that the button now shows  before proceeding.

Despite the many capabilities of the application, we will only focus on the core functions required for you to utilize.

On the Thomson Reuters Tab, the following can be seen



### Key Functions Available in Eikon Excel

#### 1. Data Retrieval

The data retrieval function could be used to retrieve real-time data and to generate tables containing a list of instruments and data items. (E.g. EPS of Apple)

#### 2. How to build your own formula

Using the “Build Formula” button in the toolbar, one can use the application to customize their own formulas with different instruments, data items and specific parameters. Here, both real-time and historical figures can be retrieved.

#### 3. How to screen for stocks

Similar to the SCREENER application in Eikon, one can use this application to generate a list of equities based on their filter preferences.

#### 4. How to plot charts

Real-time charts with the ability to reflect real-time changes can be plotted with this function

#### 5. How to use templates to generate more complex spreadsheets

Using the sample templates available in Eikon Excel, users who wish to prepare more sophisticated spreadsheets can now do so with ease.

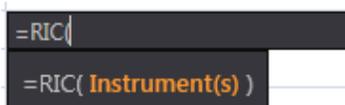
## How to Generate a Basic Table <=RIC> and <=DI>

Note that the positioning of where the information is entered is important. Hence, we would provide example cell numbers in order to illustrate the following.

Assuming you have a new spreadsheet open in Excel, the following steps could be observed in order to generate a list or table of data and instruments.

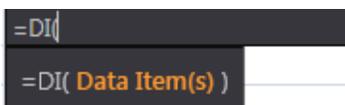
1. In Cell A2, (A3, A4 etc), enter the list of RICs (Reuters Instrument Code) you require.

Type “=RIC(“ to pull up the following function and type in the instruments. Note that you can only enter one instrument per row. The code will also be hard coded and is not part of a formula.



2. In Cell B1 (C1, D1 etc), enter the list of Data Items you require.

Type “=DI(“ to pull up the following function and type in the data items (e.g. EPS, Dividend). Note that you can only enter one Data item per row.



3. After keying in all your required instruments and data items, right-click in cell B2 and select <Thomson Reuters SpeedData> for the results to appear as follows.

	TR.TotalRevenue	TR.CompanyMarketCap	TR.RepEPSMean
STEL.SI	16961200000	61297552416	0.25019
DBSM.SI	NULL	39225098942	1.72953
STAR.SI	2444300000	6174211233	0.2005
MONE.SI	1157196000	2361796484	0.18769
OCBC.SI	NULL	34730446296	0.87755
C	NULL	1.26672E+11	4.70414

4. To “refresh” the table to make new figures appear for every RIC or DI entered, there are two ways to do so:

A: Right Click in B2 and repeat Step 3 to make the figures appear again

B: Press F2 after selecting B2 and drag the formula box to include the new RICs and DI

Please refer to the next page for another method to create the list.

## How to use the <=TR> function on Excel

Users who wish to create a more complex list or table may find the above example a little tedious. Hence, there is another method, albeit more complicated, that could be used.

1. In any empty cell, type “=TR(“ to pull up the following.

```
=TR(
=TR( Instrument(s) , Data Item(s), Parameter(s))
```

2. To start off, we would choose different instruments (E.g. AAPL.O for Apple and GOOG.O for Google), pressing enter after each instrument.

3. To continue to the Data Items, press the TAB button

4. Enter different data items (e.g. Total Revenue, Company Market Cap), separating each item by pressing enter.

5. Moving on to the period parameter, first type <PERIOD> and hit enter, type in FY0

6. In order to make the Column and Row Headings appear, press enter after deciding the period and type <CH> and <RH> and select Field and Instruments respectively.

This would generate a formula similar to the following

```
=TR("GOOG.O;AAPL.O", "TR.TotalRevenue;TR.CompanyMarketCap;TR.BasicNormalizedEps", "Period:FY0
SDate:0CY EDate:-1AW; CH:Fd; RH:In")
```

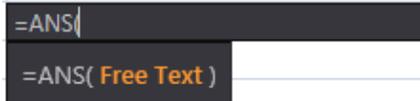
Updated at 16:38:09	Total Revenue	Company Market Cap	Basic Normalized EPS
GOOG.O	66001000000	5.28448E+11	20.59118
GOOG.O	66001000000	5.16205E+11	20.59118
GOOG.O	66001000000	5.17176E+11	20.59118
GOOG.O	66001000000	5.16782E+11	20.59118
GOOG.O	66001000000	5.04557E+11	20.59118
GOOG.O	66001000000	4.96985E+11	20.59118
GOOG.O	66001000000	4.98263E+11	20.59118
GOOG.O	66001000000	5.05931E+11	20.59118
GOOG.O	66001000000	4.88298E+11	20.59118
GOOG.O	66001000000	4.97236E+11	20.59118
GOOG.O	66001000000	4.8308E+11	20.59118
GOOG.O	66001000000	4.8308E+11	20.59118

Also, the table will be refreshed when you press the <Refresh All Workbooks> button in the Thomson Reuters Toolbar.

## How to use Eikon Answers on Excel <=ANS>

Alternatively, in order to generate an active formula, instead of a hard code, one can type <=ANS> with your requirements, similar to how Eikon Answers works on Eikon.

1. Type “=ANS(“ in any empty cell to pull up the following function



2. In the free text area, specify the companies and data items needed, leaving a space between each item. (e.g. UOB DBS OCBC Company Market Cap) or (e.g. UOB DBS OCBC EPS)

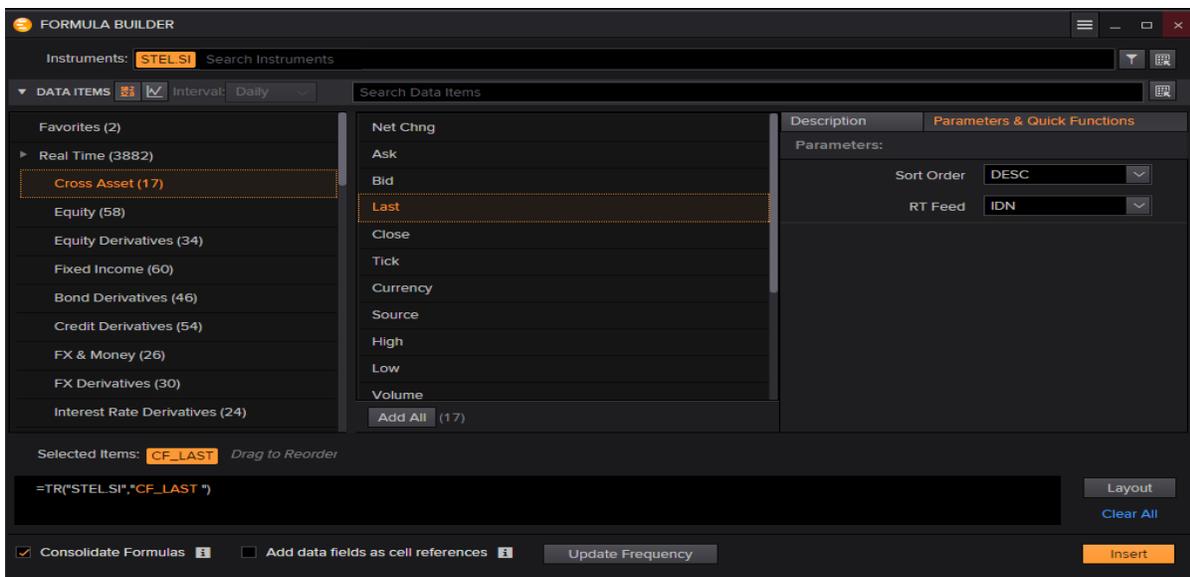
3. This would automatically correct into a function and display the results in a table, with an underlying active formula as shown below.

Updated at 17:51:57	Company Market Cap
UOBH.SI	29330412700
DBSM.SI	39331170914
OCBC.SI	34745247757

## Real-Time Data with Formula Builder

One last way to retrieve real-time data is to utilize the Formula Builder Application, by pressing on the <Build Formula> icon in the Thomson Reuters toolbar.

1. Insert the RIC that you require
2. Insert the data item you wish to inquire about. Note that the code for the last-trading price is <CF\_Last>
3. Press Insert.



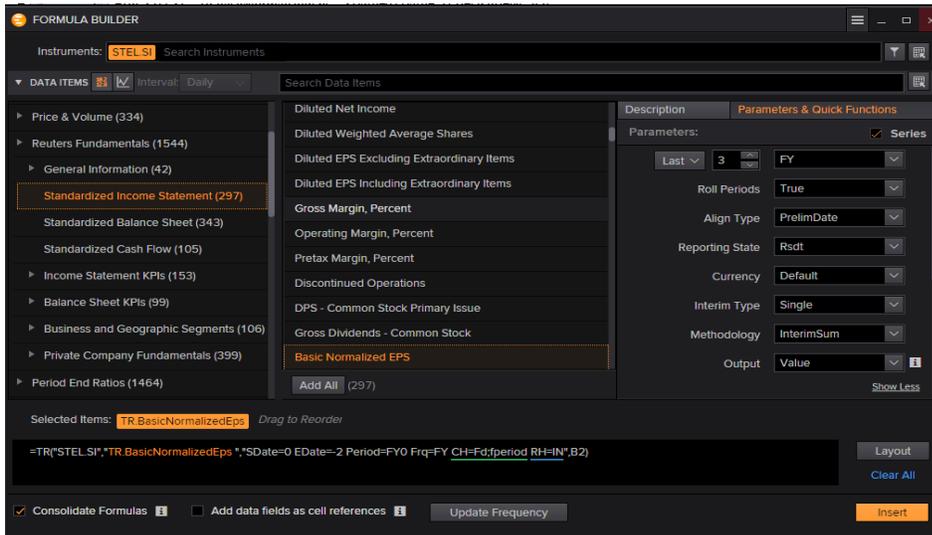
Alternatively, enter the following =TR(“STEL.SI”,”CF\_LAST”) for the figure.

## 2. Formula Builder

### Method 1: Formula Builder manually

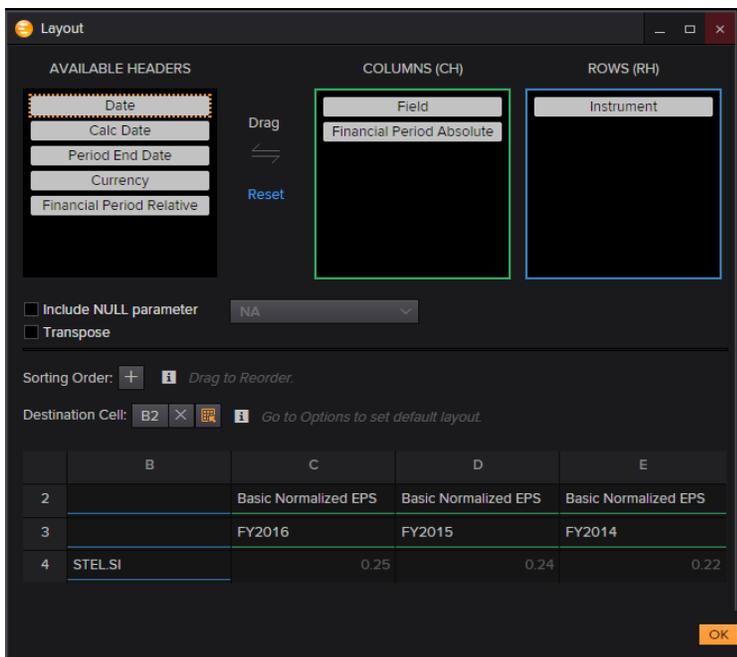
In order to enter data manually, you should do the following:

1. Enter the RIC (Instrument) required, and search for the data items either through the scroll menu at the side or by searching in the “Search Data Items” Bar.



2. After choosing the data item required, proceed to the “Parameters & Quick Functions” Tab to adjust the different Periods, Currency and data required.

3. After selecting the items, select layout to arrive at the following page. Here, edit the type of headings you require and view a preview screen at the bottom. Press Ok to insert an active formula in your destination cell.



## Method 2: Formula Builder through Cell Referencing

To build a formula through cell-referencing, one should first set up a table as shown below

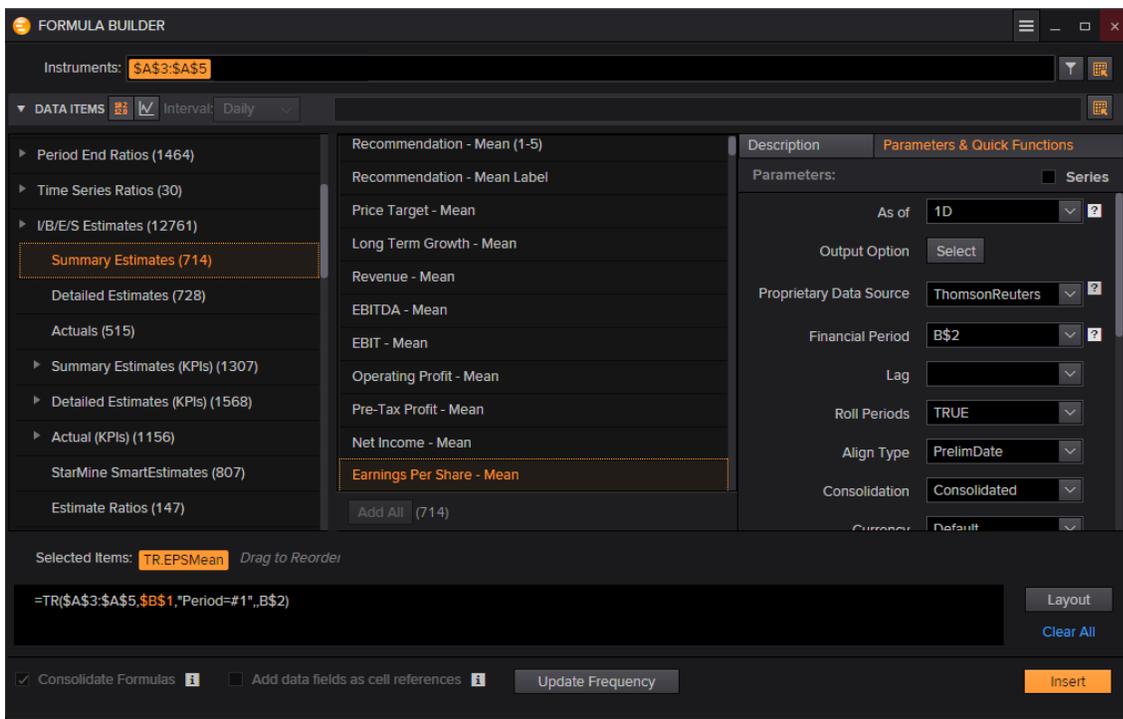
	TR.EPSMean		
	FY2015	FY2016	FY2017
STEL.SI			
DBSM.SI			
STAR.SI			

Open the Build Formula application.

1. Instrument Cell Reference by selecting the  icon next to the instrument search bar
2. Data Item Cell Reference (Note that the Data Item should be entered through the TR convention)
3. In the parameters tab, change the financial period to the last option <CELLREF> and select “FY2015”

Note: the year has to be typed with no space in between FY and 2015

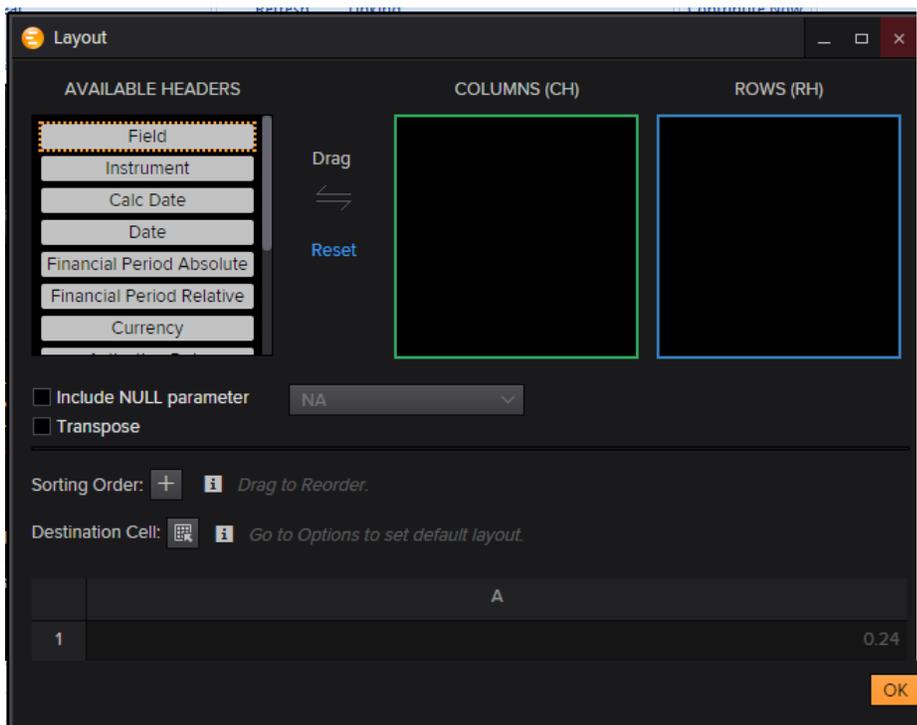
4. Change the Cell Reference to remove the “\$” in front of the alphabet signifying the column. Note that this is essential.



The screenshot shows the Formula Builder application with the following details:

- Instruments:** \$A\$3:\$A\$5
- DATA ITEMS:** Interval: Daily. A list of data items is shown, with 'Earnings Per Share - Mean' selected.
- Parameters & Quick Functions:**
  - As of: 1D
  - Output Option: Select
  - Proprietary Data Source: ThomsonReuters
  - Financial Period: B\$2
  - Lag: (empty)
  - Roll Periods: TRUE
  - Align Type: PrelimDate
  - Consolidation: Consolidated
- Selected Items:** TR.EPSMean
- Formula Bar:** =TR(\$A\$3:\$A\$5,\$B\$1,"Period=#1",B\$2)
- Buttons:** Layout, Clear All, Update Frequency, Insert (highlighted).

5. Go to layout and remove all the fields, as shown below. Under the Destination Cell, press “x” to delete any destination cell selected by default.



6. To create the table, drag the formula to cover all the necessary cells.

### 3. Screener

The screener application on Eikon Excel is largely similar to that on Eikon itself, with a similar interface and design.

Press the **Screener** button in the Eikon Toolbar.

Adjust all the necessary fields, including the currency and universe (type of companies).

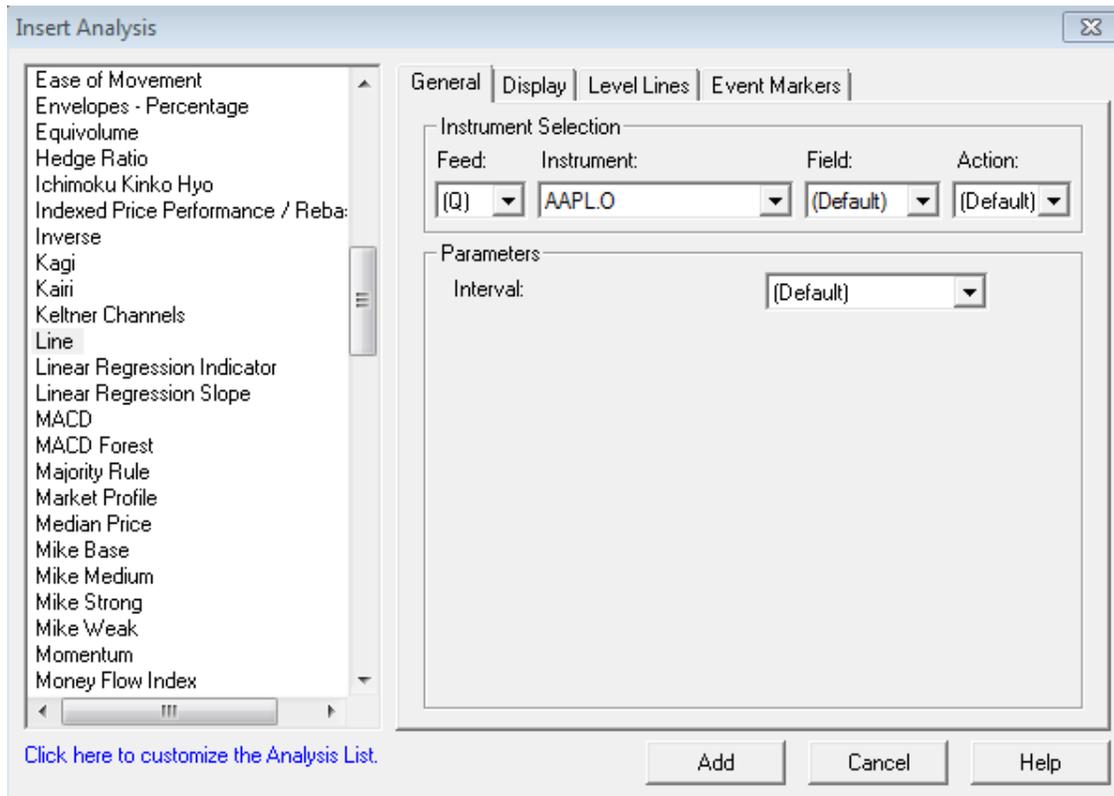
Generate a table that will look like the following by pressing “Insert Screen”

Company Common Name	Country of Exchange	Company Market Cap
Tiong Seng Holdings Ltd	Singapore	81433429.62
Global Palm Resources Holdings Ltd	Singapore	44205197.11
Bund Center Investment Ltd	Singapore	426673773
ES Group (Holdings) Ltd	Singapore	12508489.59
Smartflex Holdings Ltd	Singapore	18574900.34
Leader Environmental Technologies Ltd	Singapore	22781965.16
Yamada Green Resources Ltd	Singapore	35323375.57

## 4. Charting

Plot charts on Eikon Excel through the **Charts** button in the Toolbar using a similar interface to that of the F10 shortcut.

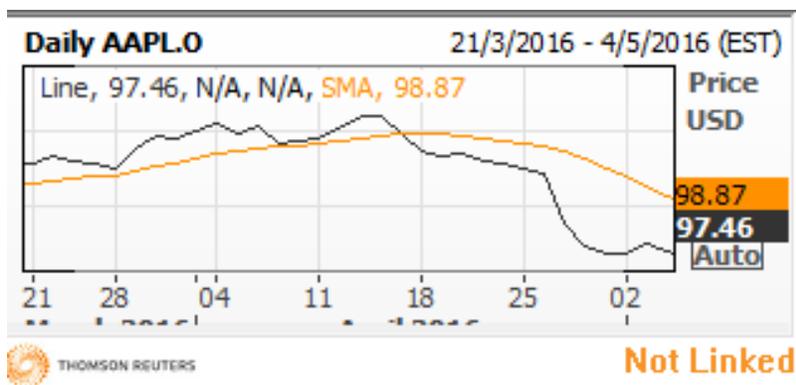
After specifying the range of cells to insert the chart component and the range of cells to be linked (if any), you will be prompted with the below page.



Here, you can select the line you want to plot, as well as insert any analysis necessary.

To return to this page after inserting the chart, press on the **Charts** button in the toolbar once again and click on **Manage Charts > Insert Analysis**.

You should be able to view a chart as follows.



Note that the date as well as the time zone can be customized to your needs as well

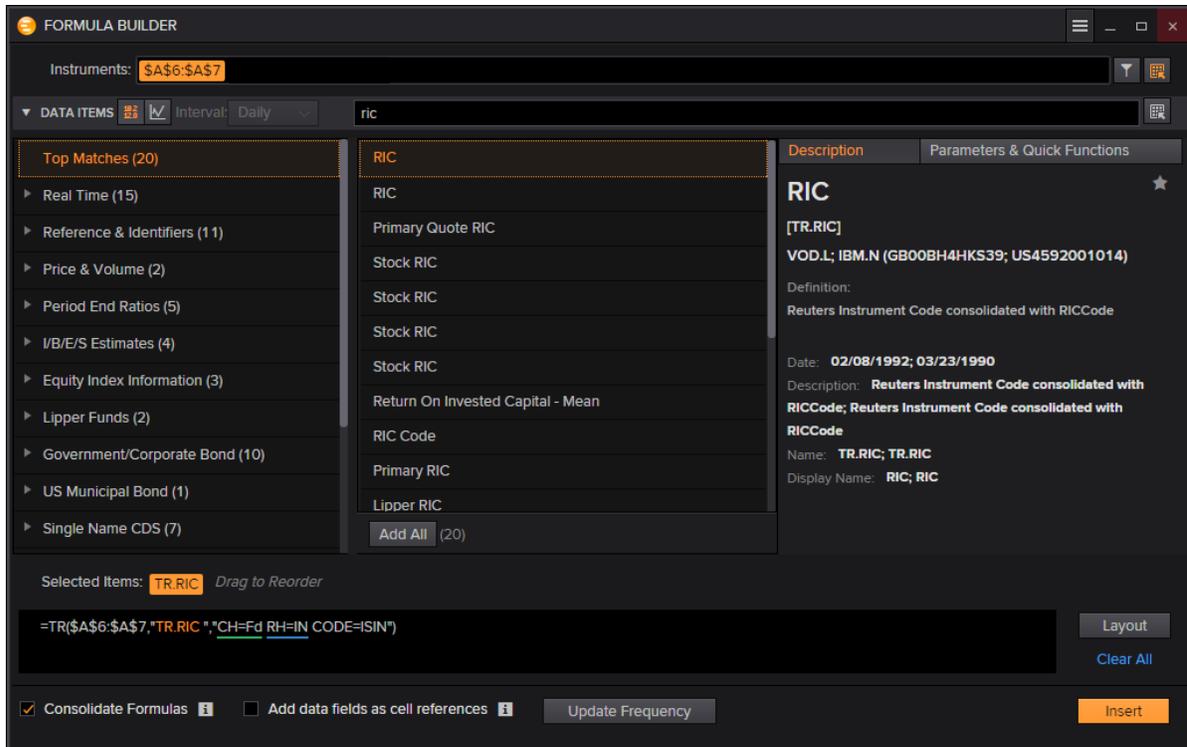
## 5. ISIN to RIC

Using Microsoft Excel, one is able to translate the ISIN of different instruments to the RIC as stated on Eikon.

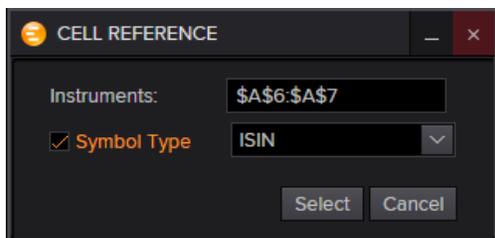
1. In Eikon Excel, ensure that the two different ISIN code (or Sedol codes) are in different cells.

GB00BH4HKS39  
US4592001014

2. Open the Formula Builder through the Eikon Toolbar.



3. Use the cell reference feature to link the cells to the instruments as required.
4. Tick the box next to the “Symbol Type” and select the type of code currently used (e.g. ISIN)

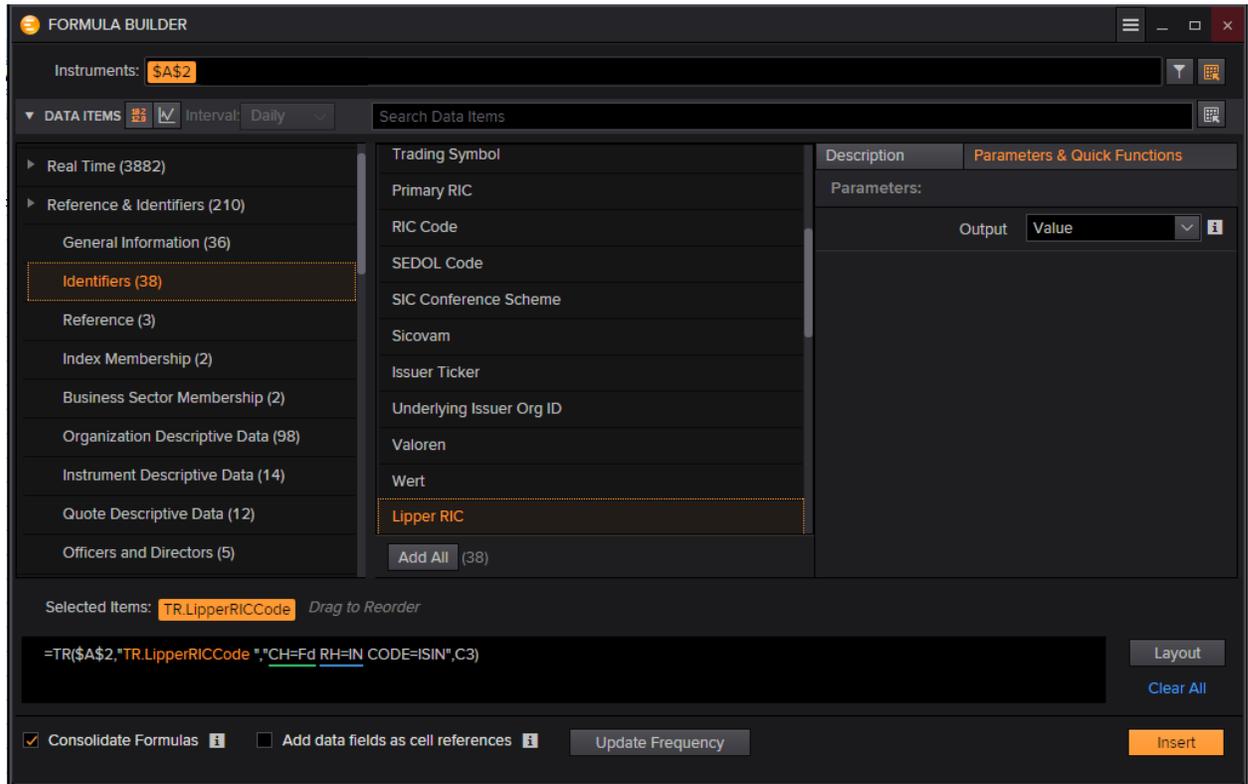


5. The RIC would then be generated as follows.

Updated at 10:07:23		
		RIC
	GB00BH4HKS39	VOD.L
	US4592001014	IBM.N

Alternatively, users can translate ISIN codes into Lipper RICs as well.

1. After opening the Formula Builder, select the Identifiers > Lipper RIC



2. After cell-referencing as shown above, click insert and the following codes will be generated.

Updated at 10:07:23		
		Lipper RIC
	US04315J2096	LP40050069