

SAFE Data Center

Starter's Guide

Eikon (Refinitiv)

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Sustainable Architecture for Finance in Europe

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1. Refinitiv's Eikon can be easily accessed through the way shown below.

- Some computers at the data room are designated for using Eikon; hence, further installation is not required. For additional installation with allowed usage of ID/PW, please visit:
<https://customers.thomsonreuters.com/Eikon/>.
In general, Eikon can be also used on mobile devices such as Apple, Android, and BlackBerry.
- Check Start - Programs - Eikon. Simply type the designated user ID followed by PW. Usually at the Data Room, you don't need to newly insert ID and PW since they are already registered. After logging-in, press F1 for immediate operational helps. For seeing what is new in Eikon, click "New" button in the top right of the Eikon tool bar.




2 Logging-in

- > Check **Start > Programs > Eikon**.
- > Simply type the designated **user ID followed by PW**.
- > Usually at the Data Room, you don't need to newly insert ID and PW since they are already registered.
- > After logging-in, press **F1** for immediate operational helps.
- > For seeing what is new in Eikon, click **"New"** button in the top right of the Eikon tool bar.

1 Installation

- > Some computers at the SAFE Data Center are designated for using Eikon; hence, further installation is not required.
- > For additional installation with allowed usage of ID/PW, please visit:
<https://customers.thomsonreuters.com/Eikon/>
- > In general, Eikon can be also used on mobile devices such as Apple, Android, and BlackBerry.

2. Eikon tool bar is the basic functional platform on which you can navigate to different sub-functions.



Thomson Reuters Eikon button. Click here to access the app menu, App Library, saved workspaces, settings, and Help.

The Search box is powered by Autosuggest and Answers. Use it to find apps, data, or answers to your questions

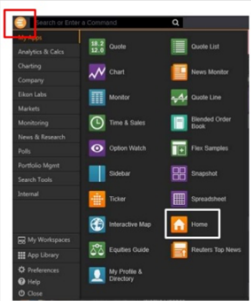
Open workspaces appear here. Workspace 1 is open by default. You can create, save, close, or load workspaces.

What's New in Eikon Favorites Alerts

Messenger My Briefcase

Start from clicking the home button

- > You can simply starting browsing by clicking the top-left home button.
- > **My Apps:** You can search specific applications for your target asset class.
- > **Markets:** You can specify the financial markets you are interested in.
- > **My workspaces:** This holds all your saved workspaces and layouts for personal optimization.
- > **App Library:** This is a searchable database of all applications.



3. All sub-functions are arranged under My Apps, which can be accessed by clicking the top-right Eikon button.

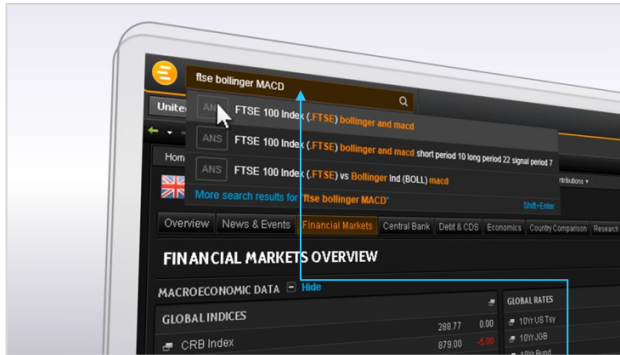
All other applications starting from here

> Click the top-right Eikon button to open the app menu.

- 1 **My Apps:** Featuring apps for your specific asset classes. You can add, remove, or rearrange apps in this menu.
- 2 **Portfolio Mgmt.:** Other apps are displayed by category.
- 3 **Option Watch:** Click any app to open it.
- 4 **My Workspaces:** Holding all your saved workspaces and personalized layouts.
- 5 **App Library:** Searchable database of all apps.
- 6 **Preferences:** Defining global options, trading settings, and more.
- 7 Click **Help** to access online help and to contact Eikon customer services.
- 8 **Chart:** Leading to all chart-related services.

The screenshot shows the Eikon application menu interface. At the top is a search bar labeled 'Search or Enter a Command'. Below it is a grid of application icons. A vertical sidebar on the left contains categories like 'My Apps', 'Analytics & Calcs', 'Charting', 'Company', 'Markets', 'Monitoring', 'News & Research', 'Polls', 'Portfolio Mgmt', 'Search Tools', 'Internal', 'Developer', 'App Studio', 'My Files', 'App Library', 'Settings', 'Help', and 'Close'. The main grid displays various apps such as 'Home', 'Quote', 'Chart', 'Quote Line', 'Blended Order Book', 'Portfolios and Lists', 'Broker Stats', 'Snapshot', 'Spreadsheet', 'World Clock', 'My Profile & Directory', 'News Discovery', 'Training', 'Monitor', 'News Monitor', 'Time & Sales', 'Option Watch', 'Index Movers', 'Sidebar', 'Ticker', 'Reuters Top News', 'Interactive Map', and 'Signal'. Numbered callouts (1-8) point to specific elements: 1 points to the 'My Apps' header, 2 to the 'Portfolio Mgmt' category, 3 to the 'Option Watch' app, 4 to the 'My Workspaces' section, 5 to the 'App Library' category, 6 to the 'Settings' option, 7 to the 'Help' option, and 8 to the 'Chart' app.

4. Search box, which is right next to the top-left home button, is a starting point for your workflow.



1 Search box

- > Search box is the starting point to further navigate into various data provided by Eikon.
- > Simply type your keyword; immediately, Eikon will automatically suggest some results.
- > For advanced searches, press **Shift + Enter**.

Search box usage tips 2

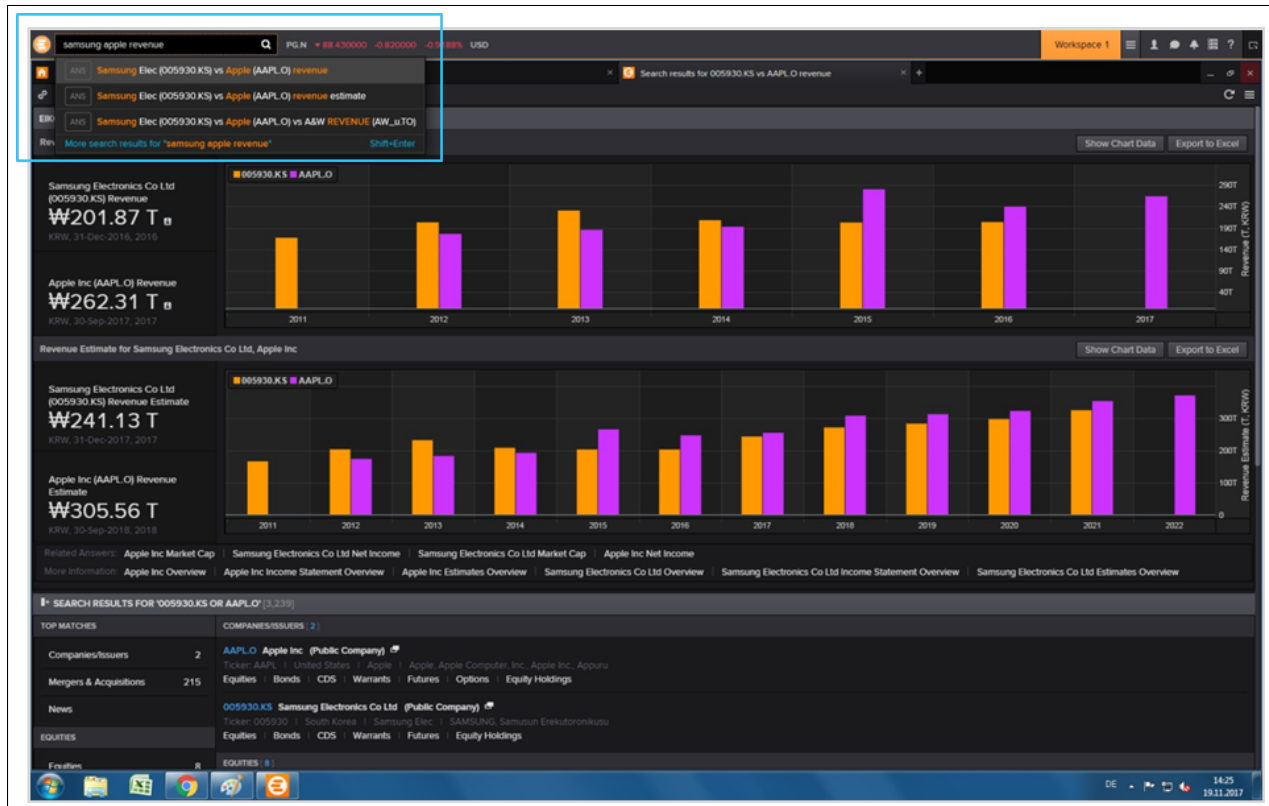
- > You can search: company specific profiles, industry codes, partial codes, ticker/coupon/maturity, country names, and etc.
- > If you want to find descriptive news on something, you can type "-news": for example, you can type "China news" for searching descriptive news on China.

Eikon's auto-suggestion function 3

- > Feel free to try any natural language as you wish to search: for example, type Apple vs Samsung revenue.
- > Eikon's auto-suggestion function will interpret your words and show some automatic answers (ANS)
- > Your key word can be rough as "China small tech companies".

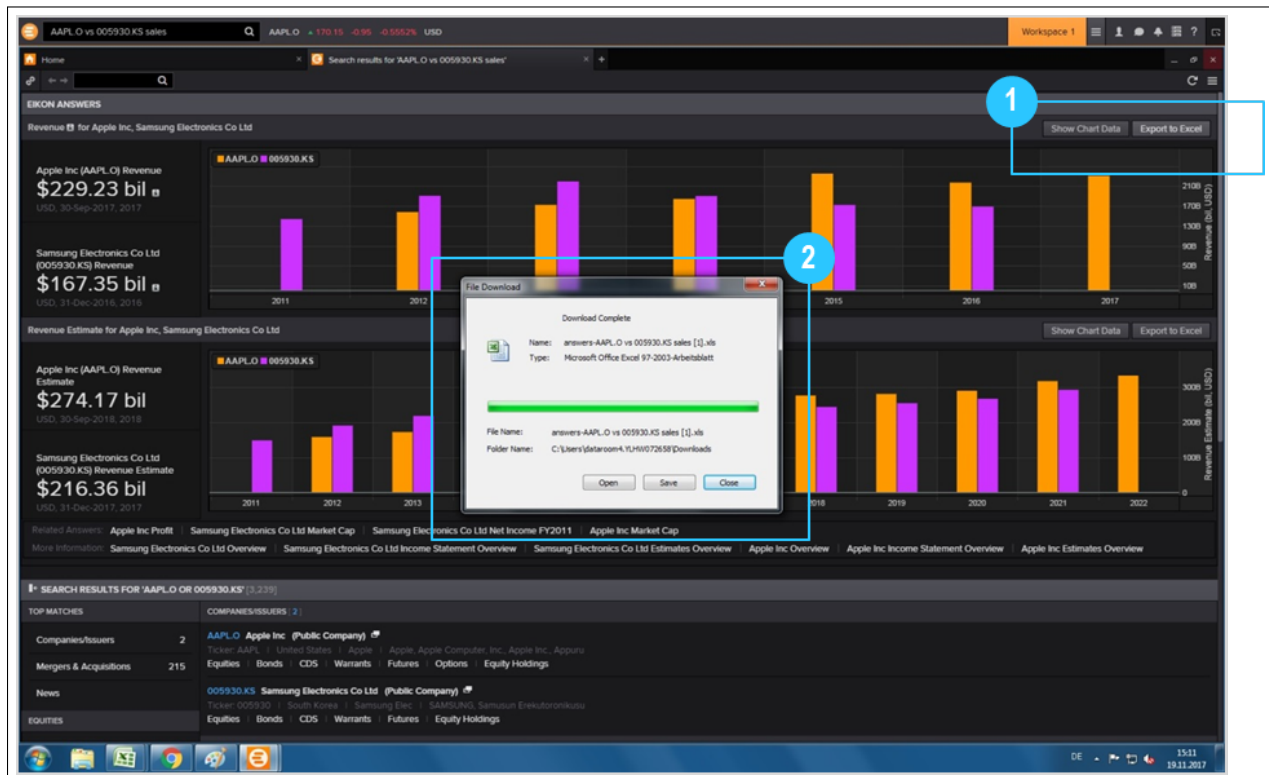
5. The search box is the starting point to navigate further; simply type your keywords and auto-suggest will propose some results.

According to your keywords, Eikon will automatically suggest some potential answers. For example, if you are comparing Samsung and Apple, simply type "Samsung Apple revenue". Below the keyword, you may see some automatically-suggested answers/information such as revenue comparison, revenue estimates, sale comparison. . . If you do not find your target information, use Shift + Enter for advanced searches.

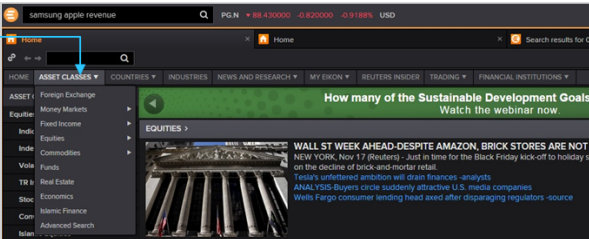


6. If you find your target information properly, you can simply transform it into an Excel-form or save it in an Excel-format.

- If you find your target information properly, you can simply transform it into an Excel-form or save it in an Excel-format. Go to the top-right "Export to Excel" function and click it. You can save either as a graph or as numerical data, depending on your objectives.

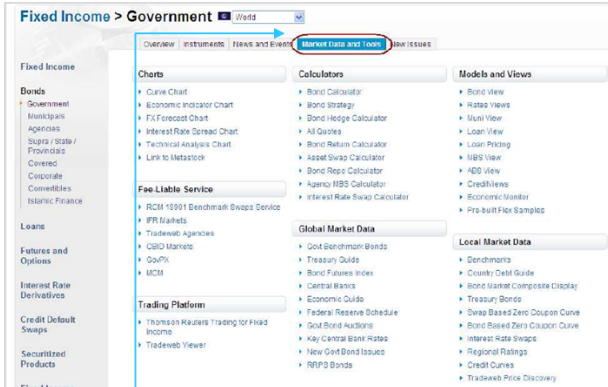


- If you have a certain financial market of interest, simply click asset classes for further browsing efficiently.



Eikon's asset coverage

- > If you are looking for a certain asset class, simply start your browsing from here.
- > Under each asset category, you can further specify your target financial market.
- > For example, Fixed income > Bonds, Loans, Futures & Options, Derivatives... > Charts, Trading information, Calculators, Other services...



8. If you are conducting a research on a certain country, simply start your browsing from Home - Countries menu.

The screenshot displays the Bloomberg Terminal interface. The top navigation bar includes 'HOME', 'ASSET CLASSES', 'COUNTRIES', 'INDUSTRIES', 'NEWS AND RESEARCH', 'MY EKON', 'REUTERS INSIDER', 'TRADING', and 'FINANCIAL INSTITUTIONS'. The 'COUNTRIES' menu is highlighted, showing a list of countries organized by region. The left sidebar contains various asset classes and market indices. The main content area displays news headlines and market data. The bottom status bar shows the date and time as 14:28 on 19.11.2017.

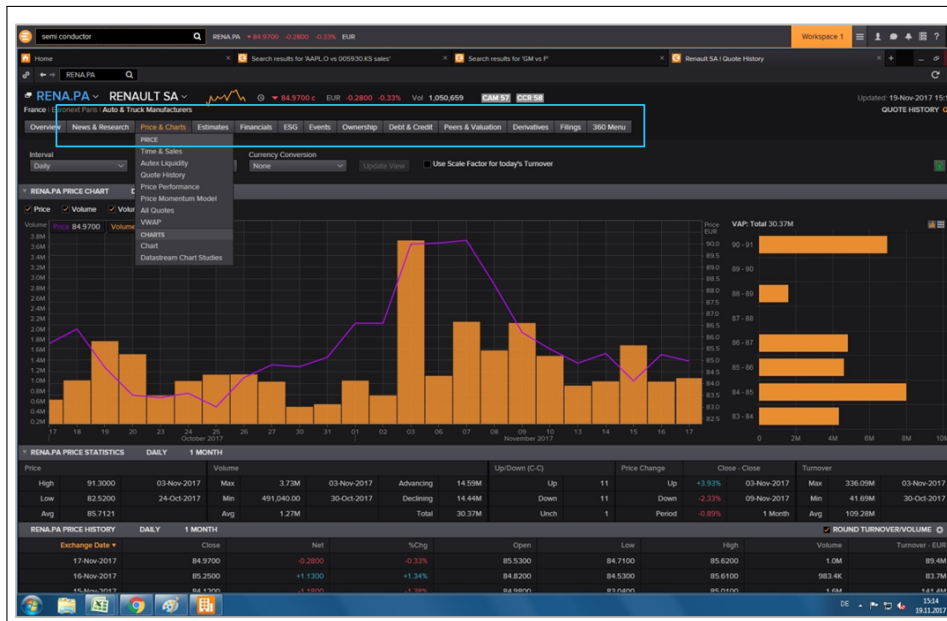
| Region | Country |
|-----------------------------------|---|
| World | Bahrain, Bangladesh, India, Pakistan, Panama |
| ASEAN | Brunei, Indonesia, Philippines, Singapore |
| Asia / Pacific | China, Hong Kong, Japan, South Korea, Taiwan |
| BRIC-4 | Brazil, Russia, India, China |
| OS | OECD |
| East Asia | China, Japan, South Korea, Taiwan |
| Emerging Europe | Bulgaria, Czech Republic, Poland, Slovakia |
| Europe | France, Germany, Italy, Netherlands, Spain |
| Convertible | Canada, Mexico, United States |
| Islamic Equities | Saudi Arabia, Qatar, Kuwait, Oman, United Arab Emirates |
| Foreign Exchange | Switzerland, Norway, Sweden, Denmark, Finland |
| Money Markets | United Kingdom, Ireland, Greece, Portugal |
| Fixed Income | Belgium, Luxembourg, Austria, Hungary |
| Commodities | United States, Canada, Mexico, Brazil, Argentina |
| Funds | China, India, Japan, South Korea, Taiwan |
| Real Estate | United States, Canada, Mexico, Brazil, Argentina |
| Islamic Finance | Saudi Arabia, Qatar, Kuwait, Oman, United Arab Emirates |
| EQUITY QUICK LINKS | United States, Canada, Mexico, Brazil, Argentina |
| Economic Monitor | United States, Canada, Mexico, Brazil, Argentina |
| Economic Indicator Chart | United States, Canada, Mexico, Brazil, Argentina |
| US Opinion Poll | United States, Canada, Mexico, Brazil, Argentina |
| Equity League Tables | United States, Canada, Mexico, Brazil, Argentina |
| Halts and Short Sell Restrictions | United States, Canada, Mexico, Brazil, Argentina |
| Biggest Movers | United States, Canada, Mexico, Brazil, Argentina |
| DealWatch (Japanese language) | United States, Canada, Mexico, Brazil, Argentina |
| Markets Research | United States, Canada, Mexico, Brazil, Argentina |
| StarMine Overview | United States, Canada, Mexico, Brazil, Argentina |
| StreetBlight | United States, Canada, Mexico, Brazil, Argentina |
| MONITORING | United States, Canada, Mexico, Brazil, Argentina |
| Create a New Flex | United States, Canada, Mexico, Brazil, Argentina |

9. If you are conducting a research on certain financial institutes, simply start your browsing from Home - Institutions menu.

The screenshot displays the Reuters website interface. The top navigation bar includes 'HOME', 'ASSET CLASSES', 'COUNTRIES', 'INDUSTRIES', 'NEWS AND RESEARCH', 'MY Eikon', 'REUTERS INSIDER', and 'TRADING'. The 'FINANCIAL INSTITUTIONS' menu is highlighted, showing a list of banks and financial institutions. The main content area features a 'Check out the New Monitor' section with a 'WALL ST WEEK AHEAD DESPITE AMAZON' headline. Below this, there are sections for 'GLOBAL ECONOMY-DWINDLING BRITISH FORTUNES TO BE LAID BARE', 'KEYSTONE PIPELINE SPILL PUSHES OIL HIGHER, FUELS TRANSCANADA OPPONENTS', and 'DOLLAR WEAK ON WORRIES OVER U.S. TAX REFORM OUTLOOK, MUELLER PROBE'. The right sidebar contains a 'Stocks Options ETFs Screener' and a table of 'INDICES' with columns for 'Last' and '% Chng'.

| INDICES | Last | % Chng |
|---------|----------|---------|
| Real | 23,582.4 | -0.43 % |
| 100 | 2,788.9 | -0.26 % |
| 100 | 6,145.1 | -0.39 % |
| 100 | 6,827.9 | -0.15 % |
| Comp | 15,985.7 | +0.40 % |
| 100 | 73,372.8 | +1.28 % |
| 100 | 7,806.8 | -0.08 % |
| 100 | 7,806.8 | -0.08 % |
| 100 | 5,191.7 | -0.32 % |
| 100 | 12,937.3 | -0.41 % |
| 100 | 10,104.0 | -0.78 % |
| 100 | 22,929.5 | -0.51 % |
| 100 | 3,374.6 | -0.13 % |
| 100 | 5,990.4 | +0.62 % |
| 100 | 29.64 | -0.16 % |
| 100 | 5,672.5 | +0.23 % |
| 100 | 11.43 | -2.81 % |

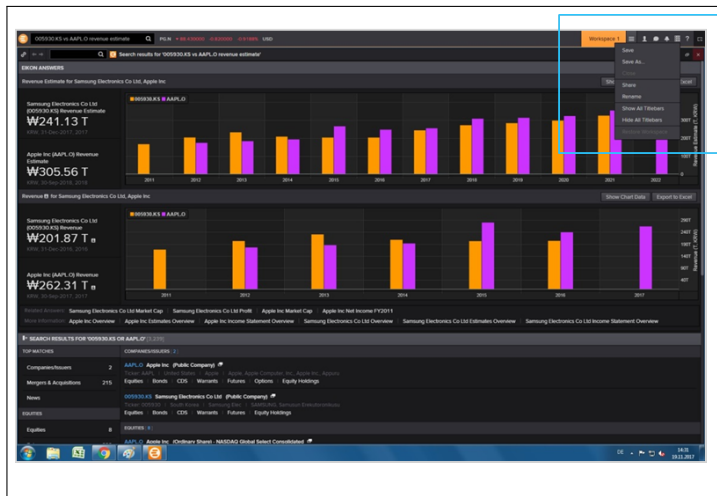
10. If you are conducting a research on certain listed companies, simply type company names and further browse from this point.



Company-specific info.

- > Price/Charts (Charting functions can be accessed differently; to be explained on Page XX)
- > Estimates
- > Financial/Accounting
- > Ownership information
- > Debt/Credit
- > Valuation
- > Derivatives
- > ...

11. After working on your own workspace, you can save it for later use: simply right-click the workspace bar and choose Save.



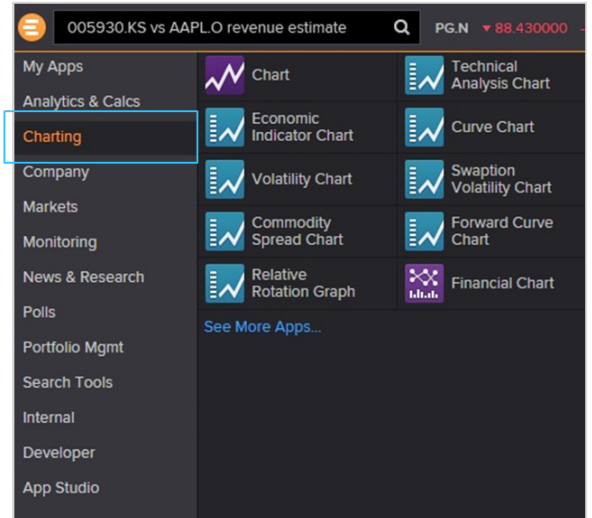
Eikon's saving function (Workspace)

- > If you want to save your search result in an Excel-form, follow the steps described on Page XX.
- > Quite often, you work with various information at the same time; in this case, you can simply save your workspace for later usage.
- > Simply **right-click the workspace bar and choose save**.
- > However, if you are using the computers at the SAFE Data Center, we recommend you not to clean your workspace savings after using the computer for searches.

12. Eikon provides its users with powerful charting functions; you can use predefined charts or customized your own charts.

Eikon's charting function

- > Click the **top-right Eikon button** to open the app menu.
- > Click **Charting** for predefined charting services such as volatility chart or commodity spread chart.
- > As a next step, you are required to fill in the **instrument, analysis parameters, and some other settings**.
- > Next page will show you an example.



13. For example, in the case of government's debt comparison, go to Economic Indicator Chart and further customize your chart.

Eikon's charting function

- > The left-window shows what to be specified for your customized charts.
- > For example, select the countries to be compared; set the starting/ending date; modify scales/windows.
- > Different colors refer to different nations to be compared.



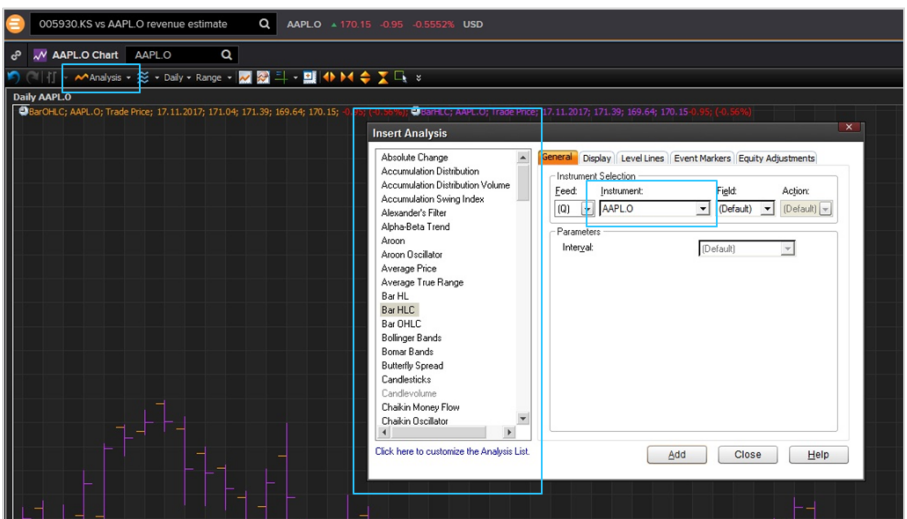
Eikon's charting function

- > The different colors of graphs refer to each nation to be compared on the screen.
- > You can further add more countries to be compared; Eikon will automatically change the designated colors.
- > This chart can be saved in various formats including Excel.

14. In the case of asset class charts, various analysis functions can be added by clicking the Analysis button as below.

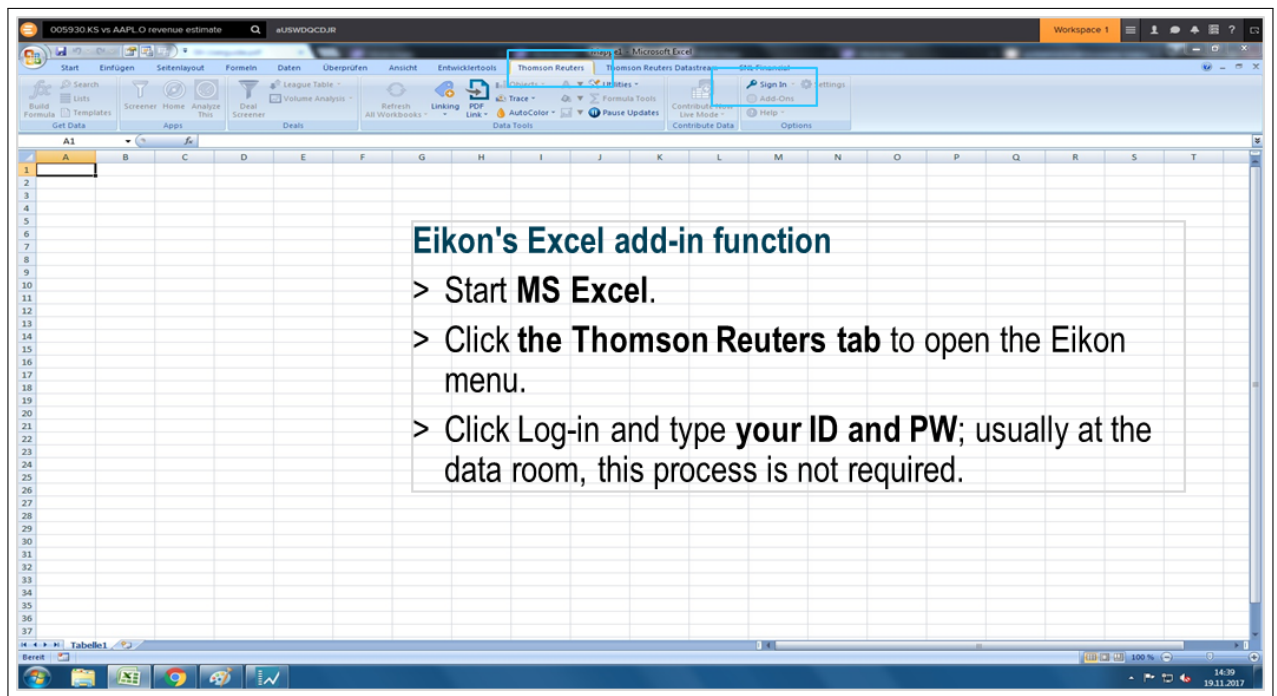
Eikon's charting function

- > For further showing analysis results, **click the Analysis button**.
- > You will see various analysis functions such as Bar HLC, Alpha-Beta trend, or Accumulation Swing index.
- > Additional analyses can be overlapped or separated respectively.



The screenshot shows the Eikon software interface with a chart of AAPLO. The 'Analysis' button in the top toolbar is highlighted. The 'Insert Analysis' dialog box is open, showing a list of analysis functions on the left. The 'Instrument' field is set to 'AAPLO'. The 'Feed' field is set to '(Q)'. The 'Interval' is set to 'Default'. The 'Add' button is highlighted.

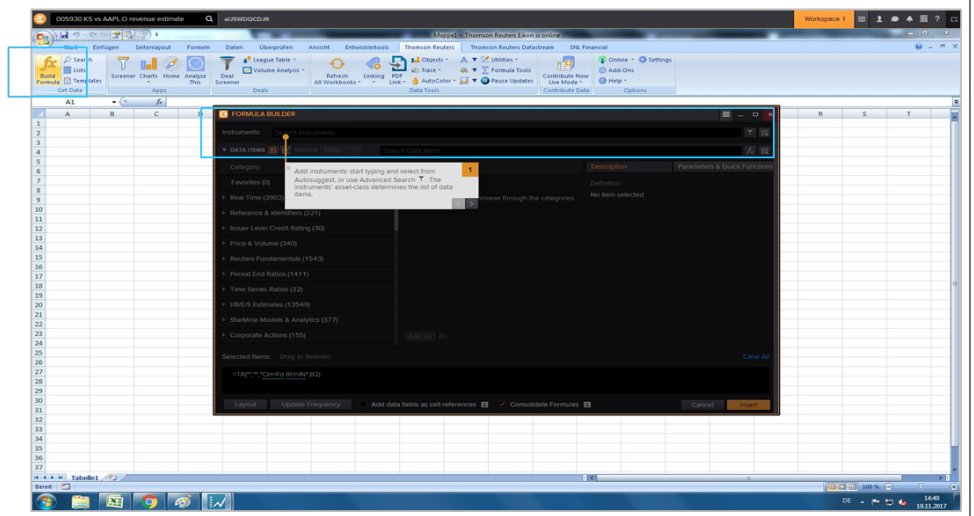
15. Many researchers use Eikon's Excel add-in function, which makes your research operations easier and more efficient.



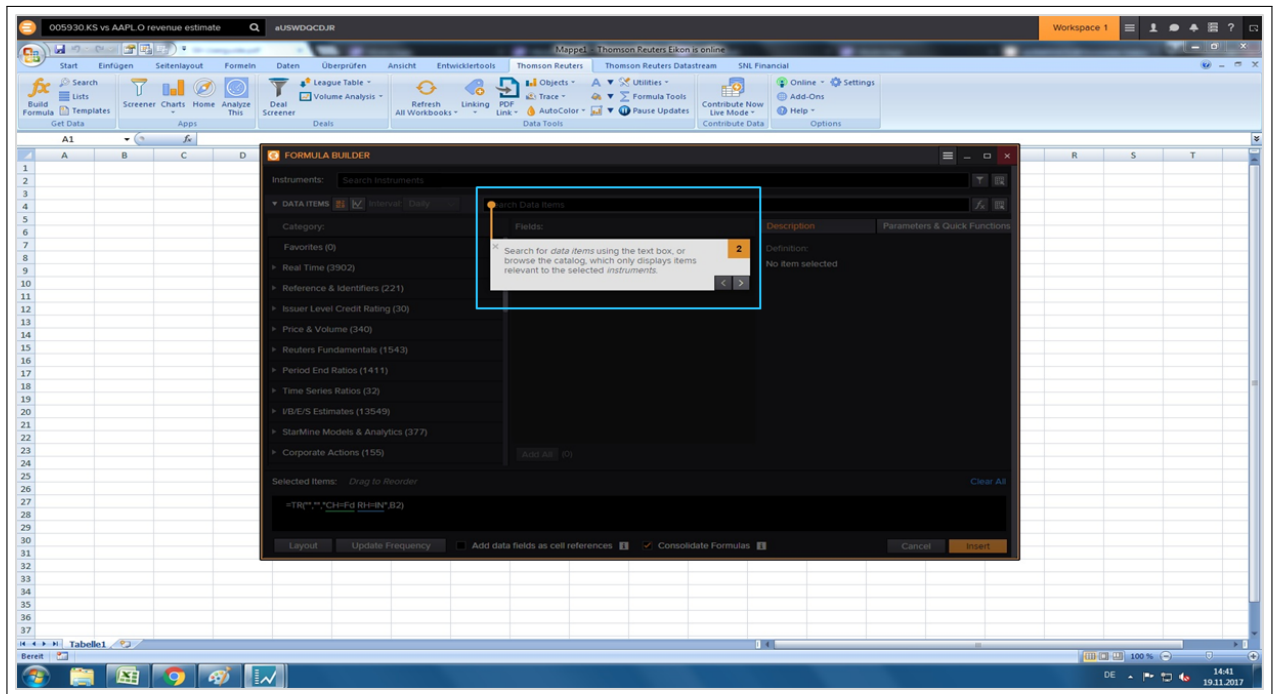
16. Start by clicking the top-left Build Formula button followed by typing your instruments.

Eikon's Excel add-in function

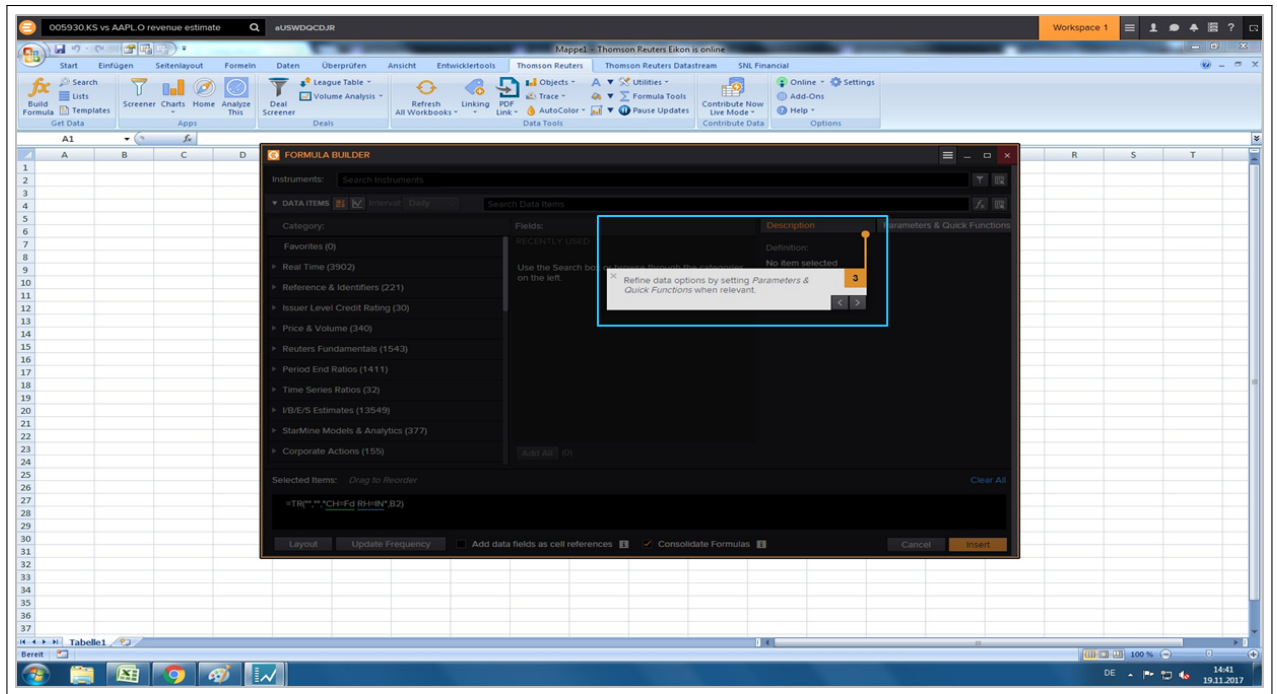
- > Select a blank cell on your worksheet.
- > Start by clicking the **top-left Build Formula**.
- > A separate window will pop-up as shown here.
- > Add your instruments; again, **Eikon's auto-suggestion** will help your browsing.



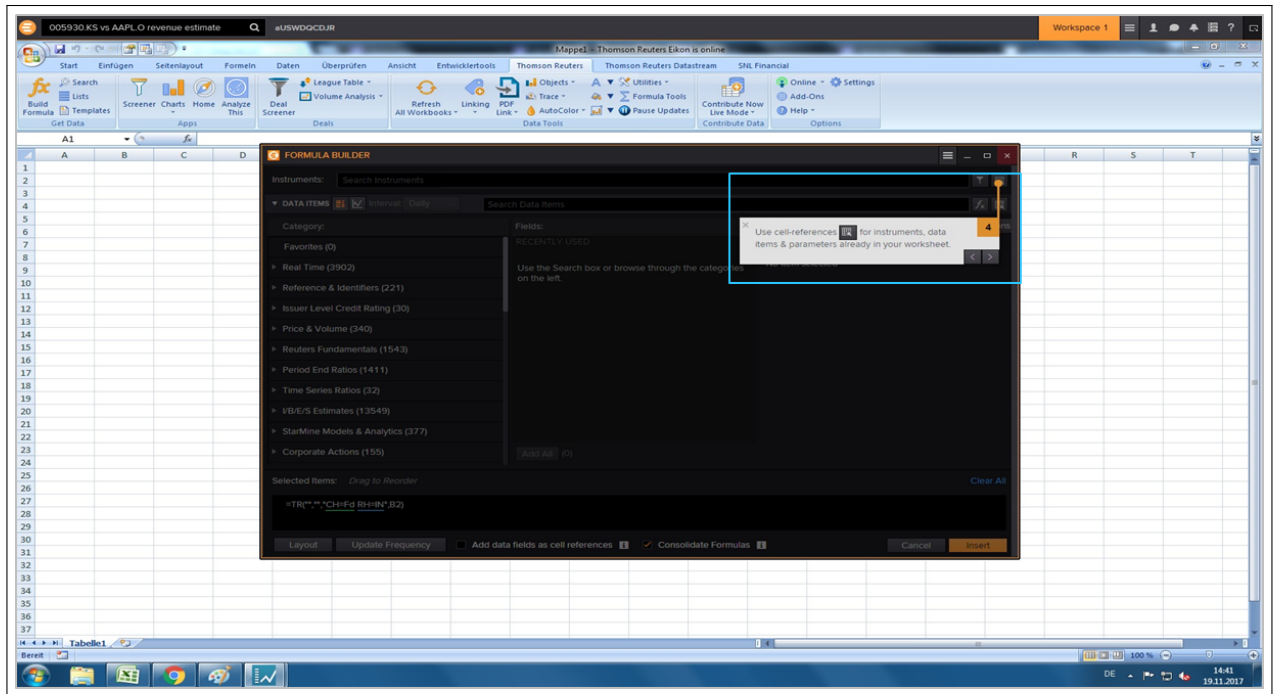
17. Search for data items using the text box, or browse the catalog, which only displays items relevant to the selected instruments.



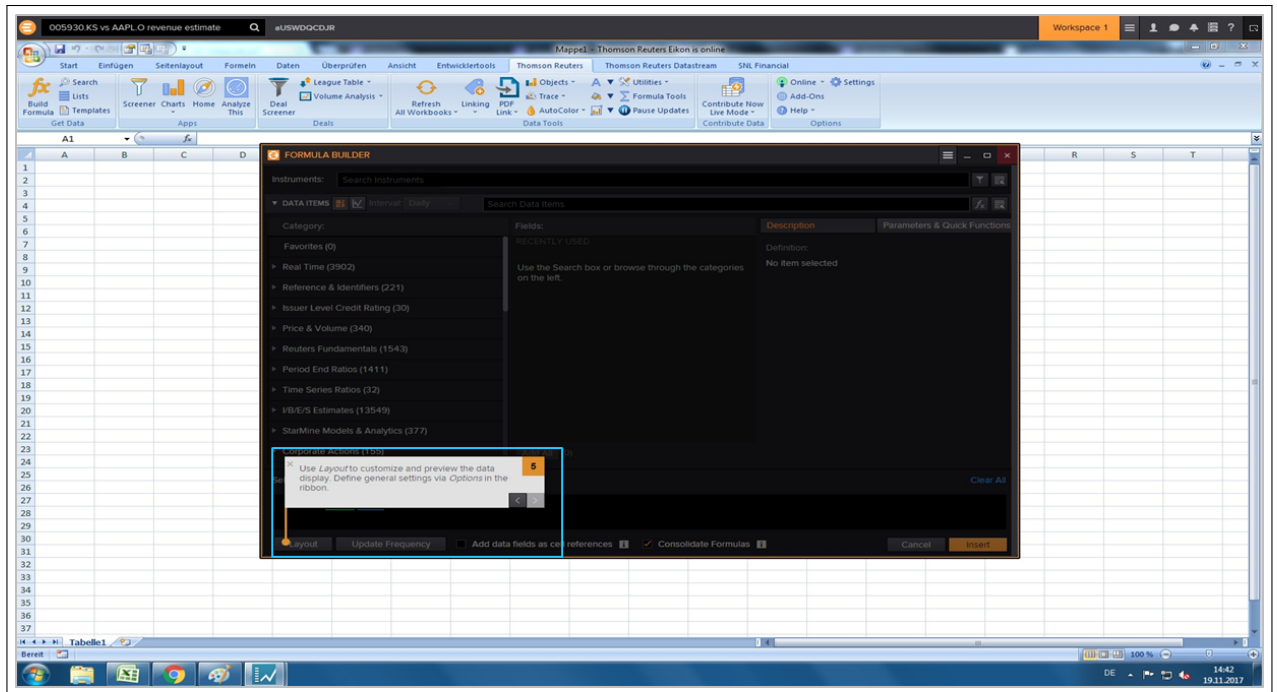
18. Refine data options by setting Parameters and Quick functions when relevant/required.



19. Use cell-references for instruments, data items and parameters already in your worksheet.



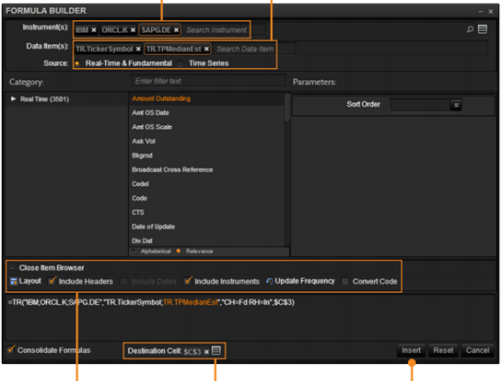
20. Use layout to customize and preview the data display; define general settings via Options.



21. Direct commands can replace the Formula Builder: TR and TR Aggregate are the most frequently-used commands.

1 In the *Formula Builder*, enter (or search for) the instruments you want data for.

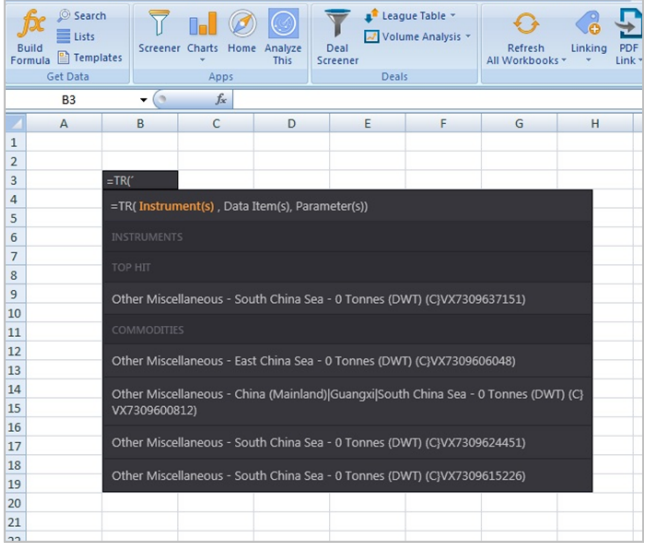
2 Select the data source you require (real-time & fundamental or time series), then enter the data item(s) you want to include. For each data item, you can define settings in the *Parameters* area.



3 Select other settings, if required.

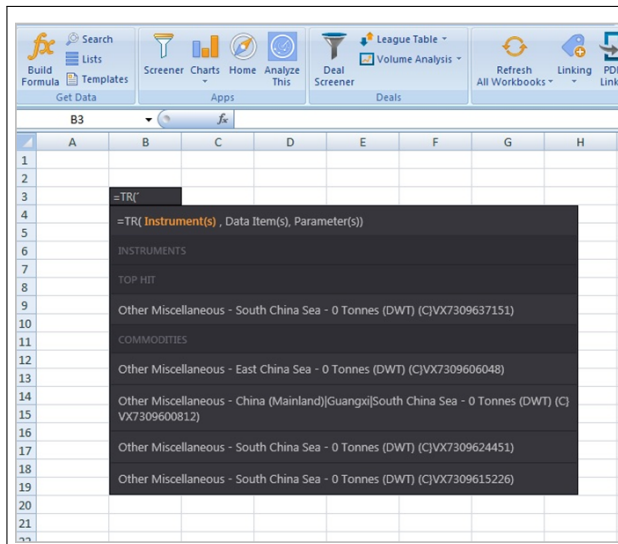
4 Select a destination cell for the data.

5 Click *Insert*.



| Instrument(s) | Data Item(s) | Parameter(s) |
|--|--------------|--------------|
| Other Miscellaneous - South China Sea - 0 Tonnes (DWT) (C)VX7309637151) | | |
| Other Miscellaneous - East China Sea - 0 Tonnes (DWT) (C)VX7309606048) | | |
| Other Miscellaneous - China (Mainland)[Guangxi]South China Sea - 0 Tonnes (DWT) (C)VX7309600812) | | |
| Other Miscellaneous - South China Sea - 0 Tonnes (DWT) (C)VX7309624451) | | |
| Other Miscellaneous - South China Sea - 0 Tonnes (DWT) (C)VX7309615226) | | |

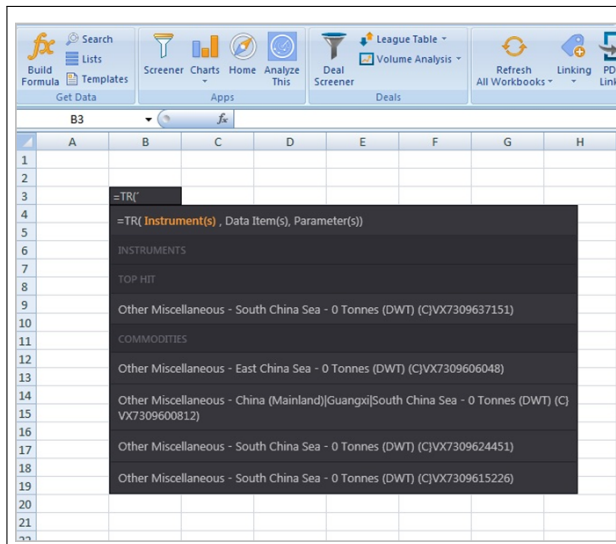
22. The TR function retrieves real-time, fundamental, and referential data; the function also supports analytics.



Eikon's Excel add-in TR function

- > TR is a flexible and dynamic function that enables you to make complex data requests with great ease.
- > Descriptive data fields.
Example: "TR.Revenue", "TR.NetSales" etc.
- > Descriptive parameters. Example: "Period=FY0 sdate=FY0 edate=FY-1 frq=FY"
- > Analytical functions.
Example: "...AVG(TR.Close(Sdate, TR=0d,edate=-9d))"
- > In the below-shown example, the TR function is used to retrieve IBM's average closing price for the last ten days.
- > =TR("IBM",AVG(TR.PriceClose(Sdate=0d, edate=-9d)))

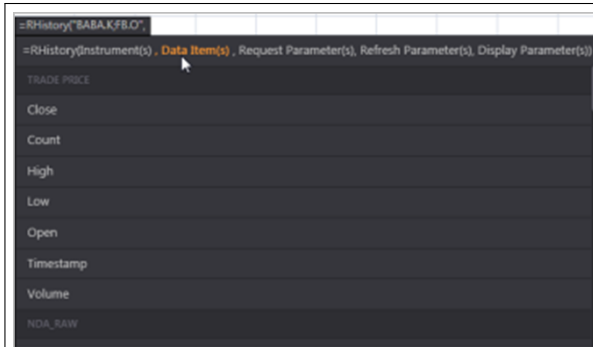
23. You can get a quick insight into the financial health, position, and performance with the TR Aggregate function.



Eikon's Excel add-in TR Aggregate function

- > Typical syntax: `=TRAggregate("Universe", "Data Item", "GroupBy;GroupBy", "Options", "Destination Cell")`
- > Examples for aggregates of the current ratio for the S&P index:
`=TRAggregate("0#.SPX", "TR.CurrentRatio", "TR.TRBCBusinessSector;TR.TRBCIndustry", B5)`
- > Examples of Sector PE of an index: `=TRAggregate("0#.SPX", "TR.PE", "TR.TRBCEconomicSector")`

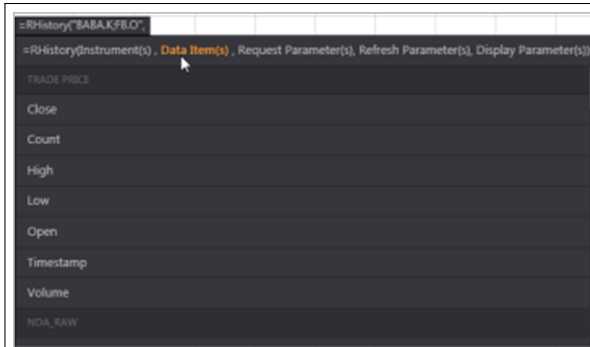
24. RHistory function retrieves a list of time series data for an instrument.



Eikon's Excel add-in RHistory function

- > Time series data comes from a historical data source that provides prices on a limited range of instruments at regular intervals, for example, on a daily, weekly, monthly, and yearly basis.
- > RHistory provides prices at non-regular intervals, for example, TAS (Time and Sales), TAQ (Trade and Quote), and TICK (tick by tick).
- > The syntax of the RHistory function is:
=RHistory("Instruments","[Fields]","Request","[Refresh]","[Display]","[Destination Cell])
- > Example timestamp and the close price of the IBM instrument:
=RHistory("IBM","ASK.TIMESTAMP;ASK.CLOSE","START:08SEP09:00:00 INTERVAL:1D",,,B2)

25. RSearch retrieves a list of instruments based on the specified search criteria.



Eikon's Excel add-in RSearch function

- > The syntax of the RSearch function is:
=RSearch("Asset Class", "Search Criteria", "[Request]", "[Display]", [Destination cell])
- > Example: The below-shown RSearch function returns a list of five and ten year single-name CDS contracts for the Vodafone Group.
=RSearch("CDS", "RefEntityFamilyValuationRic:VOD ContractCDSTerm:'5 year';'10 year' IsConvention:Yes", "NBROWS:2000", D5)