

THOMSON REUTERS EIKON

# Advanced User Manual

&

# Methodology Guide

FOREIGN EXCHANGE, MONEY MARKETS,  
BONDS, EQUITIES, COMMODITIES AND ENERGY



THOMSON REUTERS

## 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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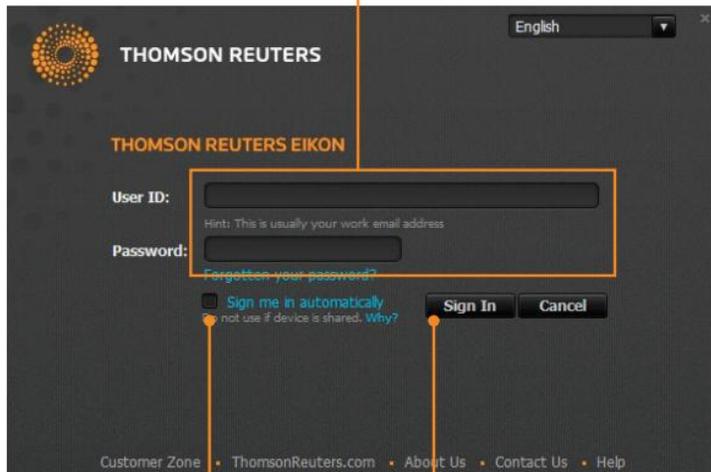
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## Part 1: How to Set Up Eikon

## 1. Setting up Thomson Reuters Eikon

### Logging in

1. Point to *Start > Programs > Thomson Reuters* and choose *Thomson Reuters Eikon*.
2. Type your user ID and password.

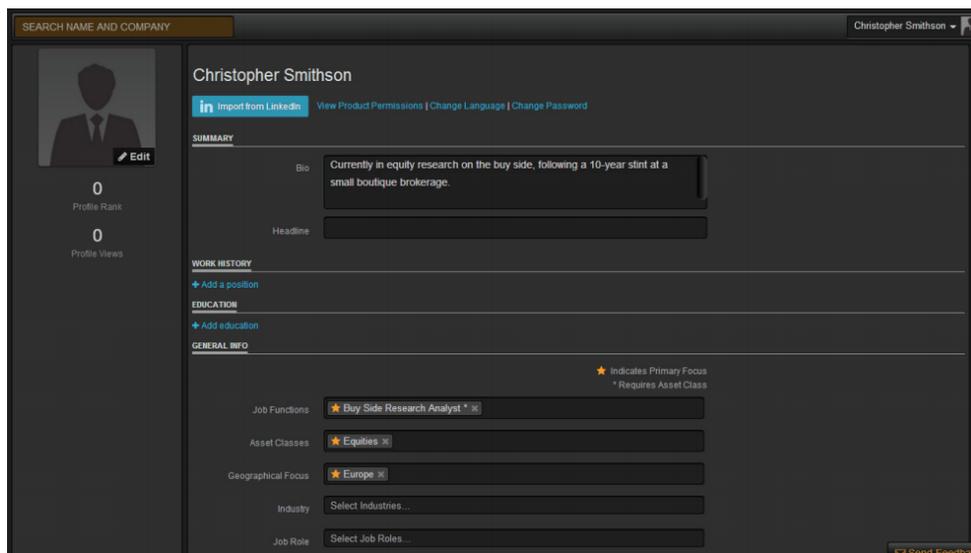


3. Select *Sign me in automatically* to avoid signing in the next time you start the application.
4. Click *Sign In*.

### Customizing your Profile

After which, you can proceed to customize your profile. There are two different ways to do so, either by manually entering the information or by importing the page from LinkedIn.

Click on *My Eikon > My Profile and Directory*



## Discovering your Workspace

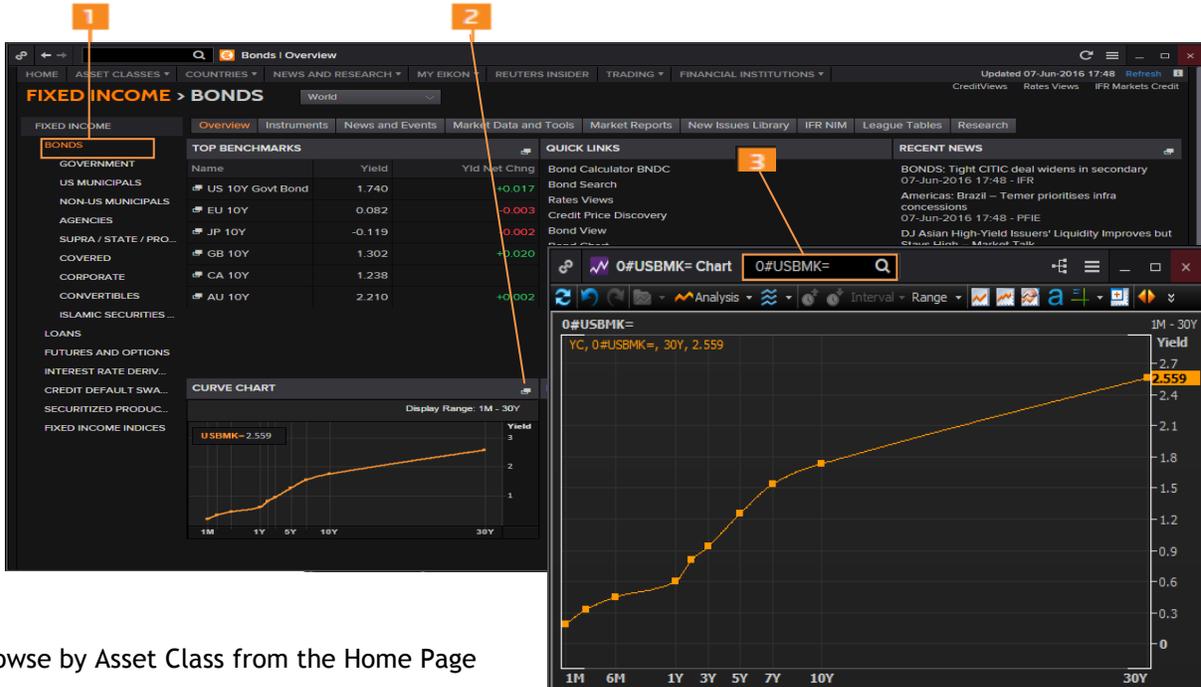
The screenshot shows the Thomson Reuters Eikon workspace. At the top, there's a navigation bar with 'Home' and various menu items like 'ASSET CLASSES', 'COUNTRIES', 'NEWS AND RESEARCH', 'MY EIKON', 'REUTERS INSIDER', 'TRADING', and 'FINANCIAL INSTITUTIONS'. The left sidebar lists 'ASSET CLASSES' (Equities, Indices, Index Futures, Volatility Indices, TR Indices, Stocks, Convertibles, Islamic Equities, Foreign Exchange, Money Markets, Fixed Income, Commodities, Funds, Real Estate, Islamic Finance) and 'EQUITY QUICK LINKS' (Economic Monitor, Economic Indicator Chart, US Opinion Poll, Equity League Tables, Halts and Short Sell Restrictions, Biggest Movers, DealWatch, Markets Research, StarMine Overview, Streetsight). The main area features a 'Monitor and analyse portfolios' header and several news articles, including 'SHELL TO EXIT UP TO 10 COUNTRIES AFTER BG DEAL' and 'CLINTON CLINCHES DEMOCRATIC PRESIDENTIAL NOMINATION - AP AND NBC'. The right sidebar has a search box and a 'TOP EQUITY INDICES' table with columns for Name, Last, and % Chng. Callout boxes A, B, C, and D are placed over the interface to highlight key features.

Here is a list of Applications and functions that you are able to access from the Eikon Homepage.

- Thomson Reuters Eikon button. Click here to open apps or access menus such as user preferences.
- The Search box is powered by Autosuggest and Answers. Use it to find information - or answers to your questions.
- Displays the current active quote, chart or news (shortcuts)
- Gives immediate access to Messenger, Favourites, and Alerts.

Tip: To customize your profile and view the most relevant home page, click *My Eikon > My Profile* in the menu bar.

## Browsing by Asset Class or Countries from the Home Page



Browse by Asset Class from the Home Page

1. Click an asset class.
2. Click View real-time.
3. The related real-time app opens.

Tip: Whenever you see , click for real-time data

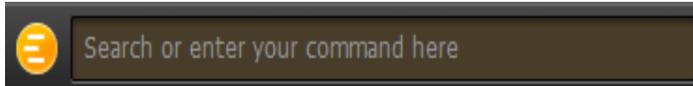
Browse Countries Information from the Home Page

1. Click on COUNTRIES from menu bar
2. Select the Country of interest
3. The related real-time app opens.
4. To change country of interest, repeat step 1 & 2

## Find Data, Information and Answers to your Questions

The Search box is a good starting point for your workflow.

Instantly navigate to anywhere in Thomson Reuters Eikon using the Search box. Simply start typing what you want to find and Autosuggest will give you immediate feedback.



For example, start typing Singapore Airline in the Search box. Selecting SIAL.SI will take you to the in-depth Company Overview including analysis tools. Access real-time data by clicking the Quote, News or Chart links in the upper right corner of your screen.

Also, you could type questions such as “What is Google’s P/E?”. Eikon Answers will display the company’s current P/E ratios and provides links to further analysis tools.

Keyword types	Examples
• Company names or common abbreviations	Microsoft, Vodafone, IBM
• Descriptive terms	Comex copper, vodafone common stock
• Standard industry codes	Ticker, ISIN, Cusip, Sedol, WERT
• Specific and partial codes	US459200HJ3, MSFT
• Ticker, coupon, and maturity	VOD > +7.5%, VOD 2015
• TBA syntax or agency names	FNMA < 9%, Fannie Mae TBA 2014, Ginnie Mae 1
• Country names for country guides	France, United Kingdom, Japan

## 2. Applications

There are some key shortcuts that you can use to make Eikon easier for you to utilize.

### F2: Quote List

	Name		Last	Pct.Chng	Net Chng	Close	Currency	+
EUR=	Euro	↓	1.1214	0.26 %	+0.0029	1.1185	USD	
GBP=	British Pound	↓	1.4455	0.28 %	+0.0041	1.4414	USD	
JPY=	Japanese Yen	↑	109.00	-0.47 %	-0.52	109.52	JPY	
CAD=	Canadian Dollar	↑	1.3073	-0.02 %	-0.0002	1.3075	CAD	
AUD=	Australian Dollar	↓	0.7225	-0.45 %	-0.0033	0.7258	USD	
MYR=	Malaysia Ringgit	↓	4.1430		0	4.1430	MYR	
CNY=	Chinese Yuan	↓	6.5785	0.06 %	+0.0037	6.5748	CNY	
INR=	Indian Rupee	↓	67.2450	-0.26 %	-0.1785	67.4235	INR	
BRL=	Brazilian Real	↓	3.5860	-0.38 %	-0.0136	3.5996	BRL	

### F4: Quote

Bid		Ask	Net.Chng	% chg	Contributor	Loc	Src	Deal	Time	
B↑ 1.1212	1.1216		+0.0027	0.24 %	BARCLAYS	LON	BCFX		16:46	
12	16									
B↑ 1.1212	1.1216				DANSKE BANK	COP	DDBA DANC		16:46	
B↓ 1.1212	1.1215				RBS	LON	RBSL RBSL		16:46	
ChangeSummary		Daily View		Calendar Highs & Lows						
MTD% chg	0.75 %	O	1.1187	05:00	Weekly High	1.1219	Monthly High	1.1219	Yearly High	1.1614
3M% chg	3.18 %	H	1.1219	15:23	Date	02JUN16	Date	02JUN16	Date	03MAY16
6M% chg	5.66 %	L	1.1168	07:22	Low	1.1099	Low	1.1114	Low	1.0711
YTD% chg	3.24 %	C	1.1185	01JUN	Date	30MAY16	Date	01JUN16	Date	05JAN16
Session O/H/L/C									Related Data	
Asia	+0.0060	Europe	+0.0052	US	+0.0056	<EUR/BKGDINFO>				
O	1.1187	05:00	O	1.1204	13:00	O	1.1156	19:00	<EURVOL>	
H	1.1219	15:23	H	1.1219	15:23	H	1.1195	04:59	<O#EURF=>	
L	1.1168	07:22	L	1.1191	15:02	L	1.1149	22:08		
C	1.1211	02JUN16	C	1.1160	01JUN16	C	1.1185	01JUN16		
(5PM TOK)			(5PM LON)			(5PM NY)				

### F5: Refresh

To refresh any page you are viewing

### F6: Max/Min

To minimize or maximize any open application. (e.g. quote app, charts in a document, linked document)

F9: News

Time	Source	RICs	Headline
04:45:49 PM	RTRS	JPY= EURJPY=	《全球汇市》美元兑日圆触及两周低点，联储升息前景存在不确定性
04:42:58 PM	DJN		DJ U.K. Construction PMI Falls to 51.2 in May -- Market Talk
04:42:04 PM	RTRS		Risks to global economy rising - PIMCO's Amey
04:31:55 PM	RTRS	JPY= EURJPY=	FOREX-Dollar hits 2-week low against yen
04:26:38 PM	RTRS	GBP1MO= GBP=	欧洲汇市：英镑徘徊在两周低位附近，受英国退欧公投担忧影响
04:24:31 PM	RTRS	.MIWO00000PUS	GLOBAL MARKETS-Stocks struggle as ECB and OPEC meetings loom
04:14:35 PM	DJN	GBP= EURGBP=	DJ U.K. Construction PMI In Focus For GBP -- Market Talk EURGBP= GBP=
04:07:35 PM	RTRS	GBP1MO= GBP=	Brexit worries keep sterling pinned down to near 2-week lows
03:53:56 PM	DJN	ABNd.AS	DJ ABN Stands Out of Benelux Bank Turnaround -- Market Talk ABNd.AS
03:50:19 PM	DJN		DJ Interbank Foreign Exchange Rates At 03:50 EST / 0750 GMT
03:14:50 PM	RTRS	LCOc1 JPY=	GLOBAL MARKETS-Asian stocks struggle on growth concerns, yen hits Japan stocks
03:08:17 PM	RSCH		Banca Intesa Serbia - Daily report 02.06.2016 (5 pages) - Banca Intesa Serbia
03:01:23 PM	FCT		4CAST - Chart USD/CHF Update: Reasonably balanced this am
02:50:26 PM	DJN		DJ Nordic Markets Seen Opening Slightly Lower -- Market Talk
02:50:18 PM	DJN		DJ Interbank Foreign Exchange Rates At 02:50 EST / 0650 GMT
02:28:15 PM	FCT		4CAST - FX Daily Outlook & Strategy, Europe 02 June
02:25:14 PM	FCT		4CAST - Chart GBP/USD Update: Larger range still contains
02:14:56 PM	DJN		DJ European Forex: -- Technical Analysis
02:06:21 PM	CNBC	BARCL 8301.T	Reuters Insider - The consequences of a Japan ratings downgrade

F10: Chart



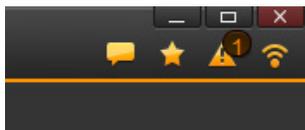
## View Related Information

Related features give you access to apps, views, news, or calculators that are relevant to the data you are currently looking at. The list of related features varies according to the instrument you are viewing and the app you are using.

The screenshot shows the Thomson Reuters Eikon interface. The main window displays a table of market data for IBM, including columns for Call, Tr, Last, Net, %Chg, Bid, Ask, ImpVol, OInt, Vol, and E. A 'Navigate' menu is open over the table, listing various related features such as Corporate View, Quote, News, Chart, Sector News, Technical Analysis Chart, Rebasng Chart, Broker Statistics, Blended Order Book, AUTEX, Option Watch, Stock Trader Focus, Blended Order Tracker, Time & Sales, VWAP Order Tracker, Average Calculator, Option Calculator, Credit Default Swap, CDS Monitor, Implied Volatility, and Pair Trade.

Call	Tr	Last	Net	%Chg	Bid	Ask	ImpVol	OInt	Vol	E
18.95	0	0%	0	0	57.41	1576	0.4			
13.34	0	0%	0	0	50.06	3096	0.4			
8.95	0	0%	0	0	44.71	3160	0.4			
5.5	0	0%	0	0	41.78	5210	0.4			
2.76	0	0%	0	0	39.55	15260	0.4			
1.02	0	0%	0	0	37.72	12425	0.4			
0.24	0	0%	0	0	36.23	10087	0.4			
0.06	0	0%	0	0	35.52	4174	0.4			
20.12	0	0%	0	0	40.26	25	0.4			
14.25	0	0%	0	0	41.02	1	0.4			
8.85	0	0%	0	0	33.29	56	0.4			
6.2	0	0%	0	0	31.56	348	0.4			
3.21	0	0%	0	0	29.42	868	0.4			
1.25	0	0%	0	0	28.08	2482	0.4			
0.42	0	0%	0	0	27.84	1121	0.4			
0.11	0	0%	0	0	28.09	1091	0.4			
18.6	0	0%	0	0	32.03	48	0.5			
14.25	0	0%	0	0	30.33	17	0.5			
10.18	0	0%	0	0	28.5	46	0.5			
6.5	0	0%	0	0	26.79	206	0.5			
3.5	0	0%	0	0	25.29	1056	0.5			
1.52	0	0%	0	0	23.99	1041	0.5			
0.53	0	0%	0	0	23.22	772	0.5			

## Setting Alerts to Track Market Movement

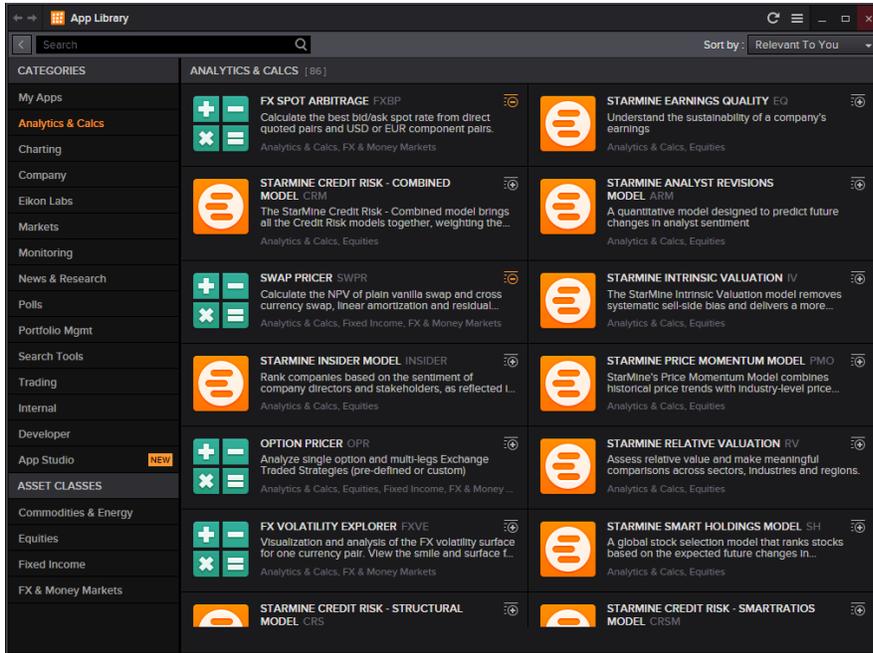


1. Click in the top right of any Thomson Reuters Eikon screen to open Alerts.
2. Click Create New Alert to set up new alerts.
3. Choose the type of data to trigger the alert:  
E.g. Market data ; significant developments; street events; news; research; corporate filings
4. Fill in the alert criteria. For example, you can receive an alert when the instrument price hits a certain threshold.
5. Choose to receive alerts within Thomson Reuters Eikon or by email.
6. Click Set to create your alert.  
The alert indicator tells you how many alerts you have received.

## App Library

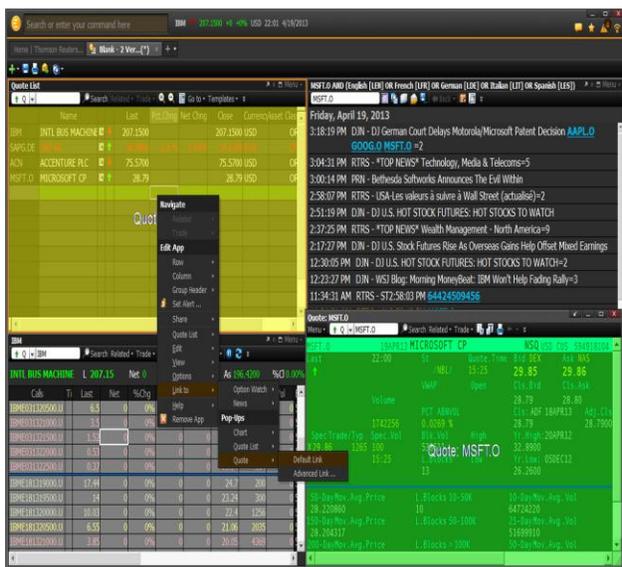
To have an overview of the different applications available on the Eikon Excel platform, one can proceed to the App Library. Here, you can browse according to Asset Classes or different categories.

To get to this page, press the Eikon button on the toolbar and select the App Library shortcut.



## Link Apps together in your workspace

- Apps can work alone, or you can link them together to harness the power and flexibility of Thomson Reuters Eikon. You can link apps within a Flex document, or link to pop-up windows so that they share data



1. Insert apps in your Flex document. For example, insert the Quote List, Option Watch, and News Apps.

2. Right-click any app in your Flex document, and choose *Link to*.

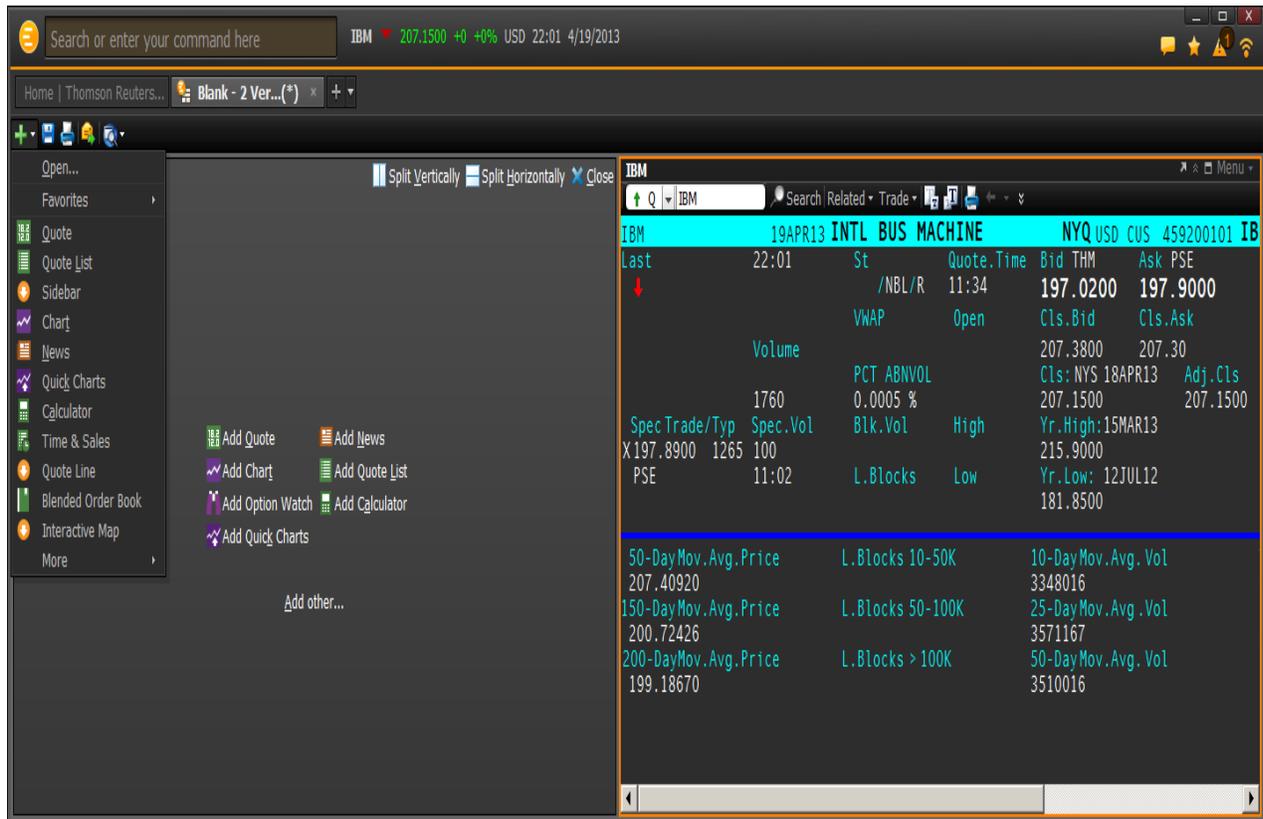
All open apps appear in the list, including pop-ups.

The source has a yellow background, the target (in this case a Quote pop-up) a green one.

3. Choose the app you want to link to.

Note: You can link from another app to a pop-up, but the pop-up cannot be the source app.

## Add Apps to Your Document



1. Click Insert.
2. Choose the app you want to add.

Tip: You can also insert any real-time app that you opened from the home page into your Flex document. Just click the pop-in/pop-out arrow in the upper right of the app.

Open Thomson Reuters Eikon in several windows

You can open several Flex documents and home pages in Thomson Reuters Eikon. You can also view several Flex documents and/or home pages at the same time:

Drag a Flex document/home page tab and drop it outside the current window. A new window opens with the selected tab. OR

Go to and then click File > New Window to display the home page in a new window. OR

Press Shift+F3 to open a new window.

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## Part 2: Cross Asset

## 1. Top News Application <TOPNEWS>

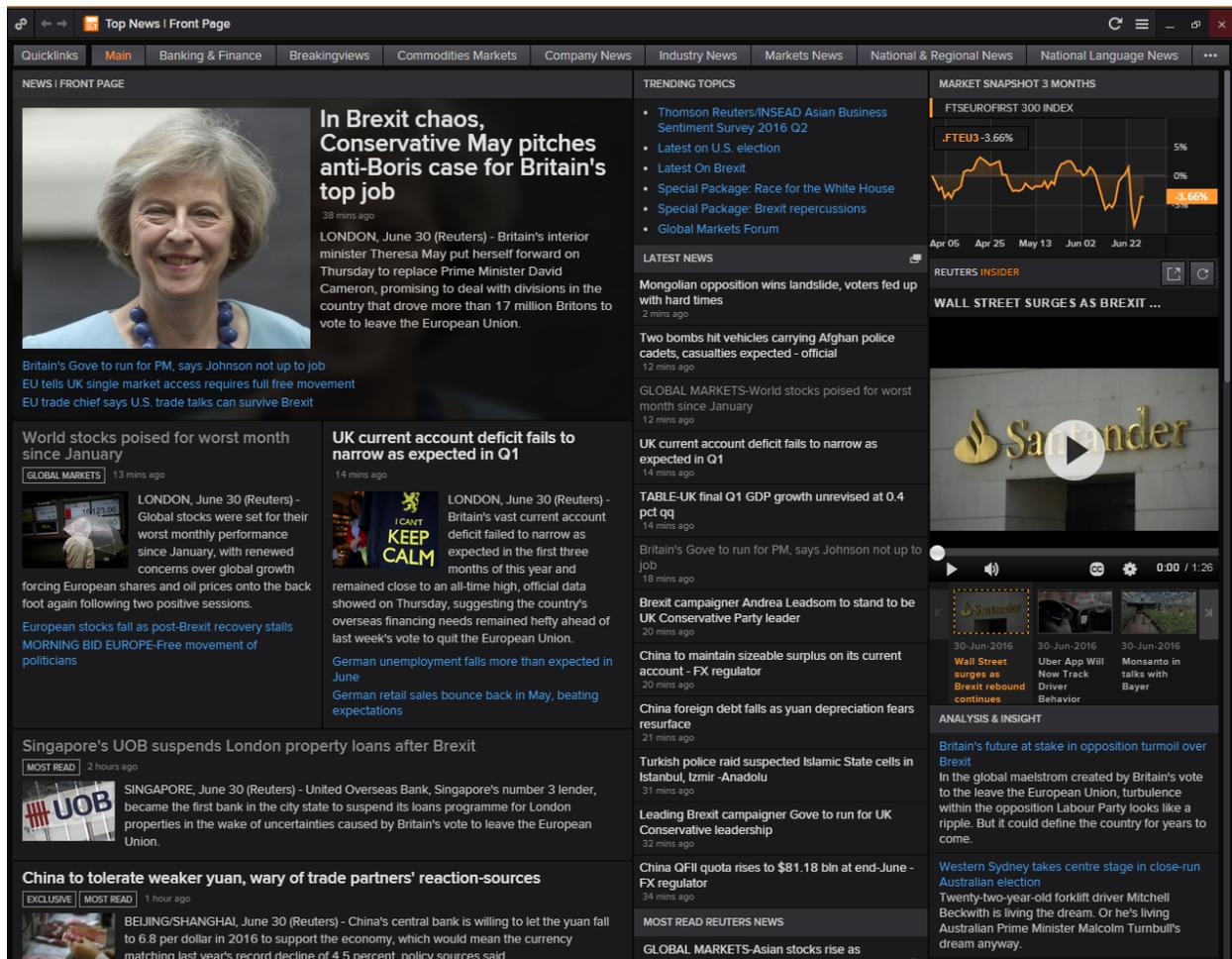
The Top News Application in Eikon would allow users to obtain a quick overview of the market news from both the main page as well as from different asset classes. From the top tab bar, the default page would be the “Front page” of the Top News app. However, from the different tabs, you could view news from the commodities markets, different companies and industries as well as by geographical zone.

While Top News provides objective news reporting, Views would provide users with opinionated based articles on certain topics.

In order to navigate to the following page,

In the Eikon Toolbar, search <TOPNEWS> in order to pull up the Top News Front Page as shown below.

Alternatively, on the Homepage, click the “News and Research” tab and select “Reuters Top News”.



## 2. Economic Monitor<EM>

Users who are interested in the different economic news and events from a specific group of countries and markets would find the Economic Monitor Application useful. On the EM application, users can specify their set of countries by filtering them on the left hand bar.

From this, a list of Economic Events, Central Bank and Political Events as well as Government Debt Auctions would be generated.

Selecting any one event would pull up the related Reuters News at the bottom of the page.

In order to navigate to the Economic Monitor page,

In the Eikon Toolbar, search <EM> in order to open the Economic Monitor Application.

The screenshot shows the 'Economic Monitor | Economic Events' window. The left sidebar lists selected countries: China (Mainland), Euro Zone, Hong Kong, Japan, Singapore, South Korea, Taiwan, United Kingdom, and United States. The main table displays economic data for Singapore as of 30th June 2016, 16:48:36. The table includes columns for Local Date, Count down, Local Time, Indicator Name, Period, Reuters Poll, Actual, Surprise, Prior, Revised, and Min. A selected row for 'Bank Lending MM' shows an actual value of 592.8B and a surprise of -16.9%.

Local Date	Count down	Local Time	Indicator Name	Period	Reuters Poll	Actual	Surprise	Prior	Revised	Min
30 Jun		07:50	IP Forecast 1 Mth Ahead	May		1.7%		2.2%		
30 Jun		07:50	IP Forecast 2 Mth Ahead	May		1.3%		0.3%		
30 Jun		10:00	Bank Lending MM	May		592.8B	-16.9%	589.8B		
30 Jun		13:00	Construction Orders YY	May		34.5%				
30 Jun		13:00	Housing Starts YY	May	4.8% ↑	9.8%	5.00%	9.0%		2.7%
30 Jun		16:30	GDP QQ	Q1	0.4%	0.4%	0.00%	0.4%		0.4%
30 Jun		16:30	GDP YY	Q1	2.0%	2.0%	0.00%	2.0%		2.0%
30 Jun		16:30	Business Invest QQ	Q1		-0.6%		-0.5%		
30 Jun		16:30	Business Invest YY	Q1		-0.8%		-0.4%		
30 Jun		16:30	Current Account GBP	Q1	-27.10B ↓	-32.59B	-5.493B	-32.66B	-33.96B	-32.20B -20
30 Jun		16:30	Money Supply M3	May		1.40%		2.70%		
30 Jun		16:30	Retail Sales YY	May		-8.4%		-7.5%		

Below the table, a 'REUTERS NEWS FOR SINGAPORE BANK LENDING MM' section shows three news items from 30 Jun 2016:

- 10:08:26 RTRS Singapore May bank lending up on higher manufacturing loans
- 10:02:10 RTRS SINGAPORE MAY HOUSING AND BRIDGING LOANS AT S\$186.5 BLN -MAS DATA SGLND=ECI
- 10:01:56 RTRS SINGAPORE MAY BANK LENDING S\$592.8 BLN - CENTRAL BANK DATA SGLND=ECI

The screenshot shows the 'Economic Monitor | Central Bank and Political Events' window. The left sidebar shows the same country filters. The main view features a calendar for June 2016, with the 30th highlighted. A list of events is displayed on the right, including:

- 30 Jun 06:40 Japan Prime Minister Shinzo Abe will hold a second meeting with Japan's top economic policy...
- 30 Jun 11:00 South Korea Finance Minister Yoo Il-ho will give a speech at a meeting of the American Chamb...
- 30 Jun 17:00 Ministry of Commerce press briefing on upcoming G20 trade ministers meeting. People's Repu...
- 30 Jun 17:00 Central Bank of Taiwan holds monetary policy meeting
- 30 Jun 19:30 European Central Bank will publish the minutes of June interest rate meeting
- 30 Jun U.S. Vice President Joe Biden will visit the Langston Hughes Community Health and Education ...
- 26 Jun-1 Jul The president of Bulgaria's National Assembly Tsetska Tsacheva will lead a visiting delegation ...
- 27-30 Jun Former Ukrainian Prime Minister Arseniy Yatseniuk visits United States (to June 30)
- 1 Jul 03:20 Federal Reserve Bank of St. Louis President James Bullard gives presentation on the U.S. econ...
- 1 Jul 15:15 European Central Bank board member Benoit Coeure participates in a roundtable discussion o...
- 1 Jul 18:00 European Central Bank chief economist Peter Praet speaks at Financial Times 'Festival of Fina...
- 1 Jul 23:00 Federal Reserve Bank of Cleveland President Loretta Mester speaks on the economic outlook ...
- 1 Jul 23:00 Bank of England chief economist Andy Haldane talks about cashless society at Financial Times...

### 3. Economics Application <EC>

Investors who adopt a top-down approach to investing would often want to analyze the overall economic situation of the country before choosing whether to invest in that market.

Hence, the Economic Application would provide a general overview of the market.

To get to this page, type EC in the Eikon Toolbar.

The screenshot displays the Thomson Reuters Economics application interface. The main navigation bar includes links for HOME, ASSET CLASSES, COUNTRIES, NEWS AND RESEARCH, MY EIKON, REUTERS INSIDER, TRADING, and FINANCIAL INSTITUTIONS. The page is titled "ECONOMICS" and is divided into several sections:

- TOP NEWS:** A list of recent news items, including "BOJ'S KURODA VOWS TO EASE MORE IF YEN MOVES HURT PRICE TARGET" and "GLOBAL MARKETS-Asian shares poised for weekly loss, Fed talk lifts dollar".
- CHART OF THE WEEK:** A line chart titled "UK market sector wages and productivity" showing "Twelve-month percentage changes" from 2000 to 2016. The chart compares "Market sector productivity" (orange line) and "Private sector regular pay (inflated by Core CPI inflation)" (blue line).
- QUICK LINKS:** A grid of links to various tools and resources, such as "World Guide", "News in Charts", "Central Banks", and "Datastream Chartbook".
- ECONOMIC EVENTS (TODAY):** A table listing events for the current day (May 13, 2016).
- REUTERS POLLS:** A section displaying recent polls, including "POLL-Reuters BoC May 2016 pre-meeting poll results".
- THE ECONOMIST:** A section featuring articles from The Economist, such as "Michael Moore's grand European tour".

Additional features include a "Macro Explorer" banner and an "ALPHA NOW" banner with the tagline "ACTIONABLE INVESTMENT INSIGHT".

Time	Period	Poll	Actual	Prior	Add
<b>Producer Price Index MM EE</b>					
Today 13:00	Apr. 2016	0	0	0.8000	
<b>Producer Price Index YY EE</b>					
Today 13:00	Apr. 2016	0	0	-2.0000	

Through this page, one can look through

- Important news that occurred in the markets,
- Recent Reuters Polls and
- Keep track of main economic events which will be occurring on that day.

## 4. Macro Explorer Application <MACROX>

Within the Economics page, there is a specific application by the name of Macro Explorer <MACROX> which can provide the user with a good and useful visual overview of how the market looks.



Through this page, different countries could be selected by choosing them on the map or through the search bar at the side. The graphs at the bottom will display the different indicators of the macro-economic situations in the countries.

The box on the left is where other countries can be selected.

The box on the upper right allows different functionalities such as

- World Map
- Moving Grid
- Scatter Plot
- Table

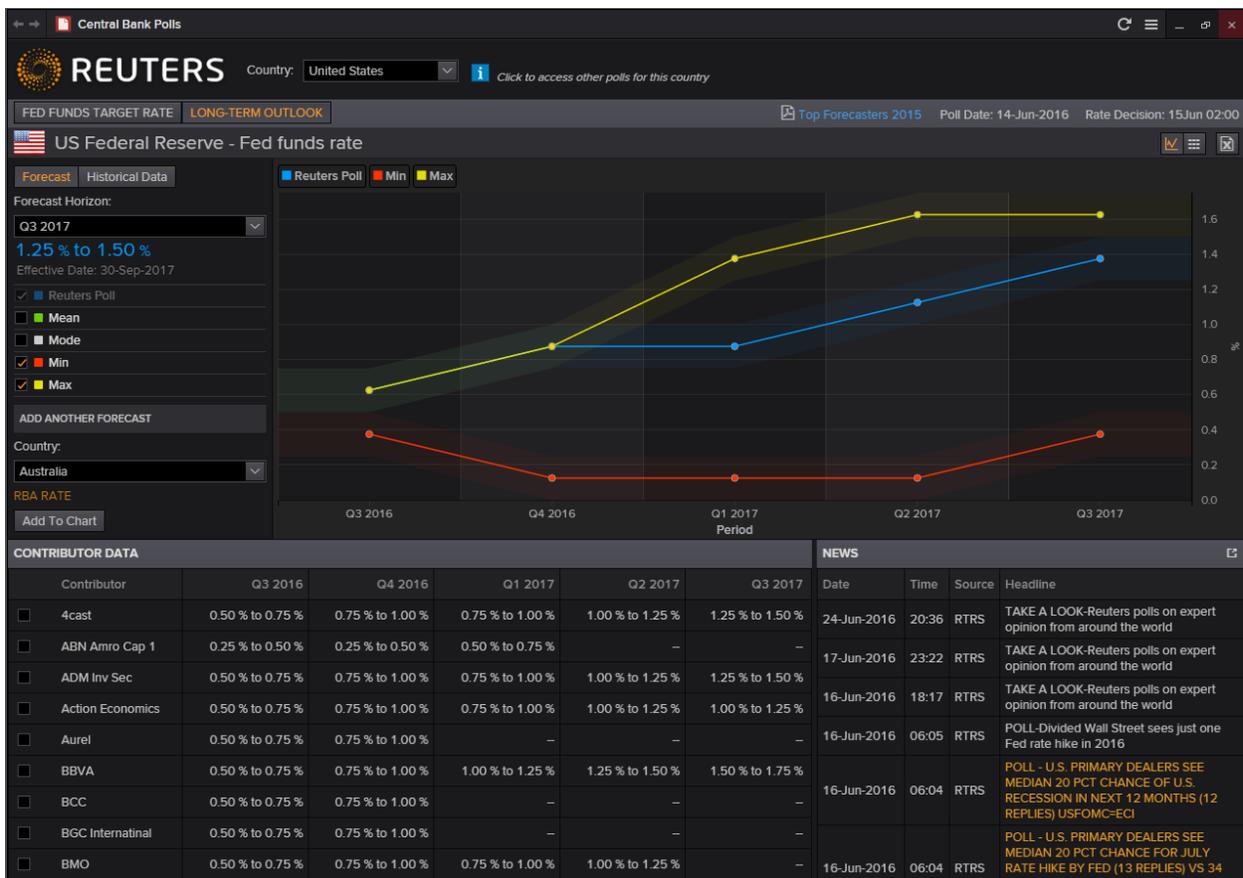
## 5. Central Bank Poll <CBP>

The Central Bank Poll application would allow users to view a forecast of the central banks' likely interest rate, providing a long-term outlook on the bank's decision.

Most countries have only a long-term outlook where different analysts' opinions are collated and displayed in the form of a line chart. In addition to the Reuters Poll in blue, users can also add in lines depicting the max and min based on estimates as well as a mean and mode figure.

However, due to the high interest placed on the Fed Funds Target Rate, there is also a poll collected for those figures and hence, the US Federal Reserve's page also has a Fed Funds Rate estimate provided.

In the Eikon Toolbar, search <CBP> to open the application.

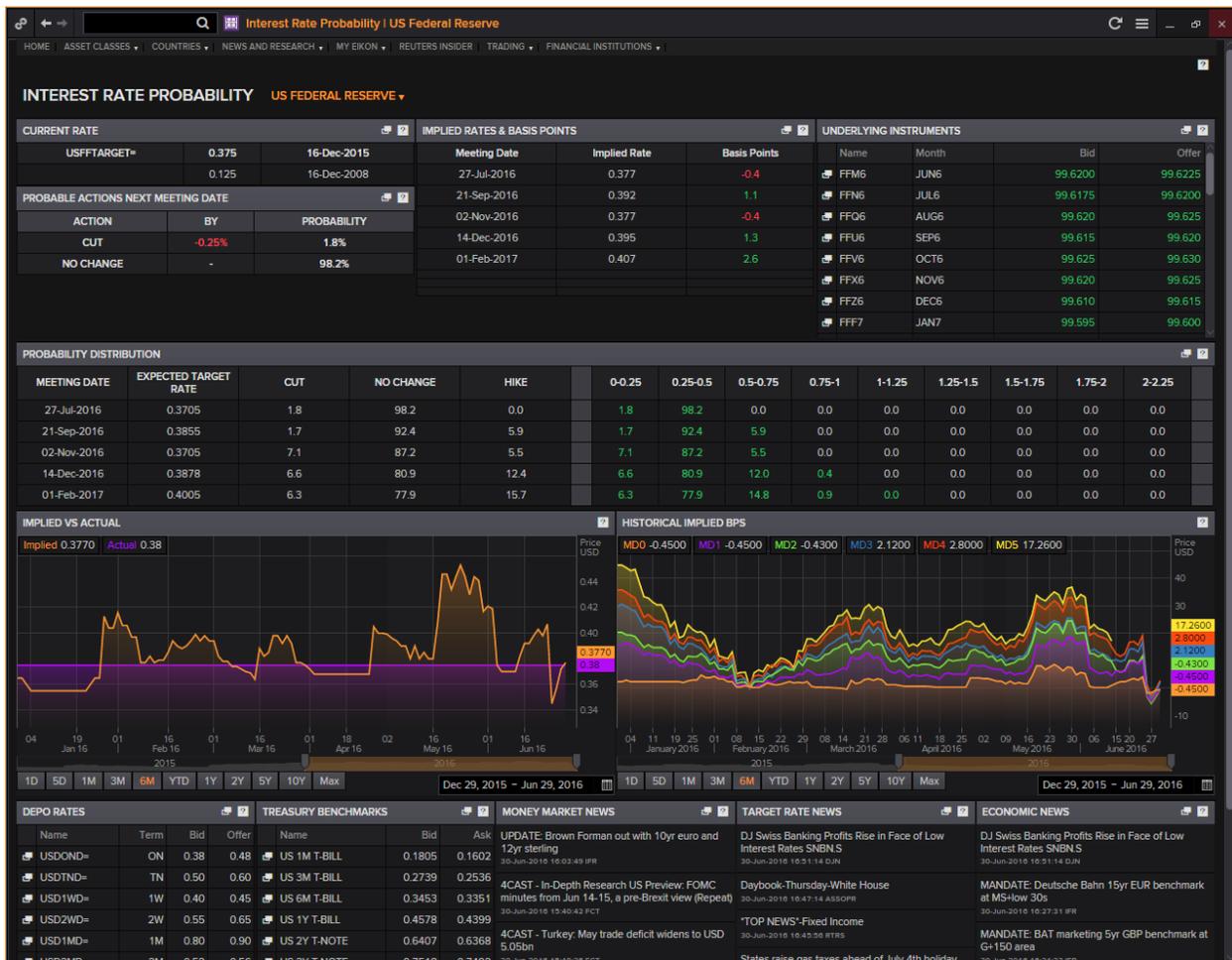


## 6. US FED Interest Rate Probability

For users who require more detailed information than just the figures from the CBP Application can refer to the following application for a more detailed probability breakdown of expected Fed rate hikes or cuts.

In the following application, the page shows the current target rate as compared to a historical figure. In addition to that, a table displaying the probable actions for the next month (e.g. cut or no change) would also provide a concise overview of how the Fed is likely to vote at the next meeting.

In the Eikon Toolbar, search <US FED INTEREST> and select the application from the drop down menu bar.



## 7. Economic Indicator Poll <ECOP>

Another poll that may be useful to users monitoring the different economic markets would be the Economic Indicator poll. Using this page, users are able to view estimates of different economic indicators of different markets.

By selecting the country as well as the indicator (e.g. Federal Budget), users can view the Reuters Poll (consolidated from different polls) as well SmartEstimate and the Actual figures. The line chart below shows how the estimates and polls have fared in the past as compared to the actual figures that have been reported.

In order to reach the following page,

In the Eikon toolbar, search <ECOP>.



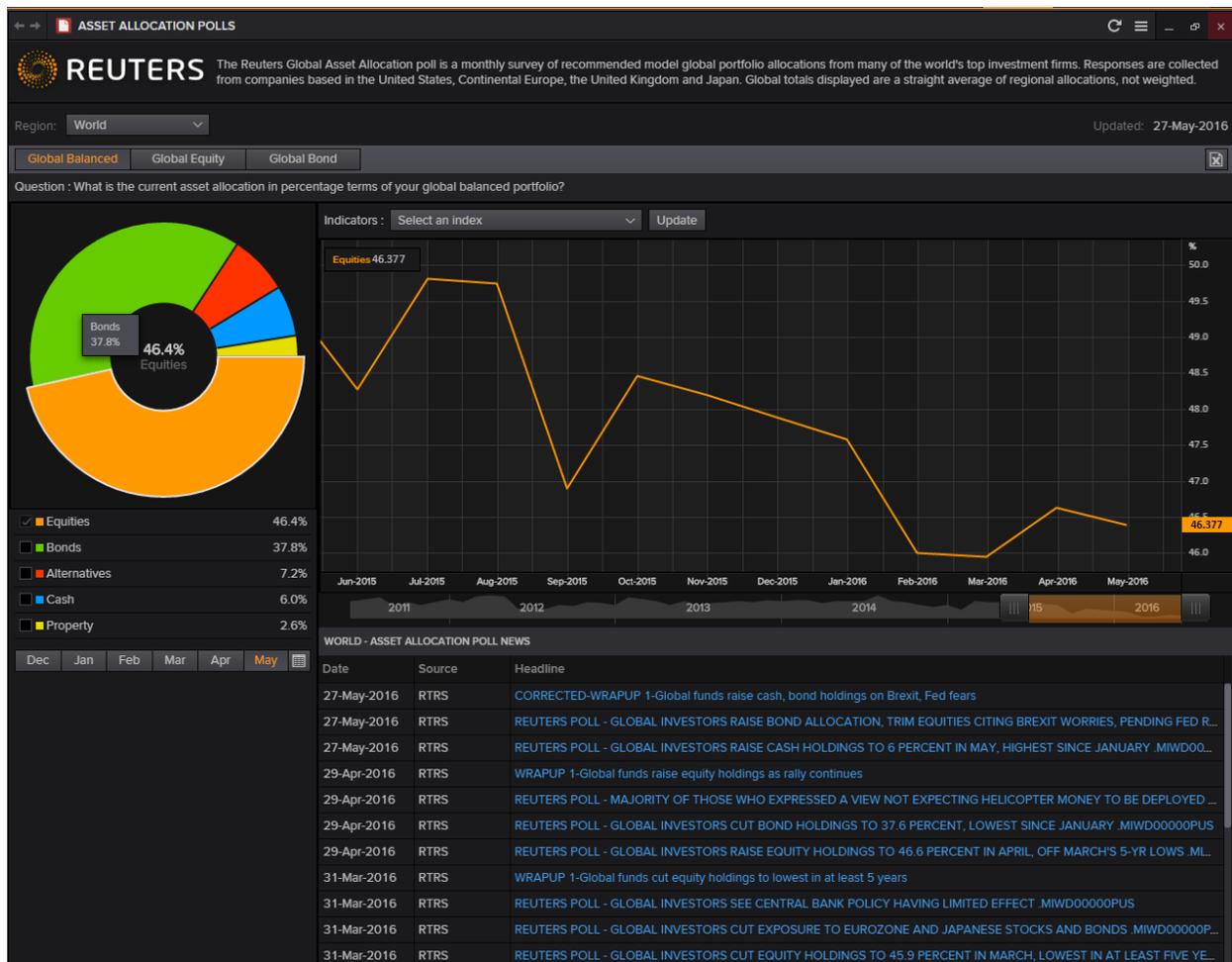
## 8. Asset Allocation Poll <AAP>

The Reuters Global Asset Allocation poll is a monthly survey of recommended model global portfolio allocations from many of the world’s top investment firms. Responses are collected from companies based in the United States, Continental Europe, the United Kingdom and Japan. The Global totals displayed are not weighed but are a straight average of regional allocations.

On this page, there is a consolidated “World” allocation for

1. Global Balanced - to show the allocation between equities, bonds, alternatives, cash and property
2. Global Equity - to show the allocation amongst different geographical areas for equities
3. Global Bonds - to show the allocation amongst different geographical areas for bonds

Alternatively, you are able to view the same breakdown above for different countries, mainly Europe, Japan, United Kingdom and the United States.



## 9. Correlation Matrix <CORR>

The correlation matrix allows users to measure the change in different indicators (such as price, total return etc) of one asset against another for any one period.

Using this calculator, the correlation, R-squared, covariance, beta and alpha can be measured. For correlation in particular, a figure closer to 1 would indicate a higher amount of positive correlation. On the other hand, a figure closer to -1 would indicate a higher amount of negative correlation.

1. In the Eikon toolbar, search <CORR> in order to open the application.
2. Under “List Management”, create a list of equities, indexes or other instruments you would like to compare.
3. In the “Main” page, adjust the following parameters
  - Periodicity: Daily etc.
  - Start Date
  - End Date
4. Adjust the lists X and Y and press “Calculate” in order to generate the results
5. Also, you can change the Statistics and the Fields if necessary

The screenshot displays the 'Correlation Matrix' application interface. At the top, there are navigation links: Regression Analysis [REGR], Average Calculator [AVRG], Volatility Surface Calculator [VOLS], List Monitor [LMON], and Pairs Calculator [PAIR]. The main title is 'Correlation Matrix'. Below the title, there are input fields for 'Periodicity' (set to Daily), 'Start Date' (01 Jul 2015), 'End Date' (01 Jul 2016), 'For Missing Data' (Ignore), 'Use Intermediary Date' (unchecked), 'End Date' (01 Jul 2016), and 'Transformation Rules' (Ln Return). A 'Calculate' button is visible. Below this, there are tabs for 'Main' and 'List Management'. Under 'Main', there is a 'Formatting and Filtering' section with 'Threshold1' (-0.5000), 'Threshold2' (0.0000), and 'Threshold3' (0.5000). Below that, there are tabs for 'Matrix', 'Summary', and 'Top Distribution'. The 'Matrix' tab is active, showing a table of correlation coefficients for three assets: AAPL.O, MSFT.O, and GOOGL.O. The table has columns for 'X' and 'Y' lists, and a grid of correlation values.

Statistics:	Correlation			
Modify Lists	X: eq	AAPL.O	MSFT.O	GOOGL.O
Y: eq		Trade Price(Clos)	Trade Price(Clos)	Trade Price(Clos)
		1.0000	0.6043	0.4444
		0.6043	1.0000	0.6166
		0.4444	0.6166	1.0000

## 10. Average Calculator <AVRG>

Using the Average Calculator application, users are able to compare the average prices or volatilities across different time periods for your specified list of instruments.

In order to pull up a similar list as shown below,

1. In the Eikon Toolbar, search <AVRG> to open the application
2. Under “List Management”, specify the different instruments that you wish to search for.

#	Type RIC Or Click an Icon for Formula	Name	Select Field	Adder	Scaling Factor
#1	AAPL.O	APPLE INC	Trade Price (Close)	0.00	÷1.00
#2	MSFT.O	MICROSOFT CP	Trade Price (Close)	0.00	÷1.00
#3	GOOGL.O	ALPHABET INC A	Trade Price (Close)	0.00	÷1.00

3. Here, you can view the average prices and volatilities over different time periods for the specified “Start Date” and “End Date” that you have chosen at the top of the page.

4. Also, different frequencies can be selected.

**Average Calculator: MyListHHH**  
Updated at 4:02:49 PM

List Name: B. MyListHHH | Frequency: Monthly | Start Date: 01 Jan 2015 | End Date: 04 Jul 2016 | Reset Dates To Default  
Currency: Native | Settings | Calendar: None

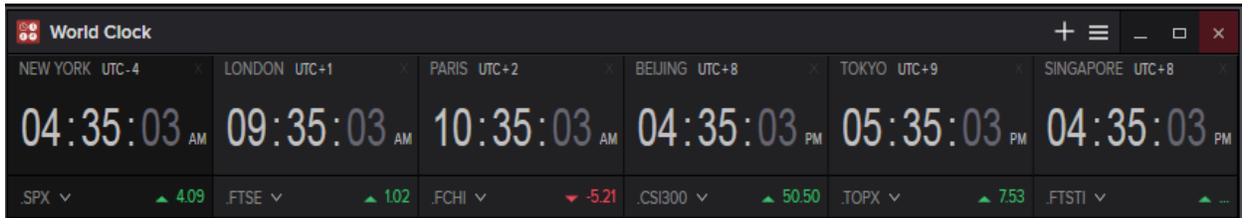
Display: Prices | **Volatilities** | Raw Data | Decimals: Increase / Decrease | Show No. Days | Show Details | Copy to Clipboard

Enter Setup	#1	#2	#3
RIC or Formula	AAPL.O	MSFT.O	GOOGL.O
Name	APPLE INC	MICROSOFT CP	ALPHABET INC A
Select Field	Trade Price (Close)	Trade Price (Close)	Trade Price (Close)
Currency	USD	USD	USD
Adder	0	0	0
Scaling Factor	+1	+1	+1
1 Jul 2016	3.3999	0.2194	10.6710
2 Jun 2016	18.3908	25.9981	20.9799
3 May 2016	20.7397	20.7769	15.2357
4 Apr 2016	28.8983	29.6403	25.1330
5 Mar 2016	19.0813	22.3343	18.8752
6 Feb 2016	23.2855	26.5569	27.4319
7 Jan 2016	43.9238	37.6102	32.8808
8 Dec 2015	24.2203	23.3212	21.3182
9 Nov 2015	23.4654	16.1147	17.7383
10 Oct 2015	25.6755	36.1989	25.4744
11 Sep 2015	33.2183	28.2726	26.2599
12 Aug 2015	43.8086	36.9333	41.4973
13 Jul 2015	24.9697	19.6463	55.8583
14 Jun 2015	11.3386	15.1966	14.6895
15 May 2015	22.0261	20.5050	16.9815
16 Apr 2015	19.6982	38.1842	20.9311
17 Mar 2015	21.9223	19.8848	20.2833
18 Feb 2015	20.2706	13.2802	18.0580
19 Jan 2015	37.7130	43.8034	29.2442

## 11. World Clock

The World Clock application allows users to view the different time zones available as well as its respective equity indexes. This allows users who trade in different markets to monitor both the times as well as the market conditions.

In the Eikon Toolbar, search <CLOCK> and select from the drop down menu.



## 12. Key Stats <KEYST>

The KeyStats page allows users to compare a maximum of three different securities and to compare them across different valuation methods.

In the Eikon Toolbar, search <KEYST> and choose the three securities to compare.



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## Part 3: Foreign Exchange Market

# Eikon shortcuts: FX

REAL TIME MONITORING	
ALT	Alert Manager
OPW	Option Watch
Q	Quote
QL	Quote List
QLI	Quote Line
SDB	Sidebar
TAS	Time & Sales
TICK	Ticker

NEWS	
FXBUZZ	FX Buzz
NEWS	News
TOPNEWS	Top News

CHARTING	
CHRT	Chart App
ECOC	Economic Indicator Chart
FXFC	FX Forecast Chart
FXVO	FX Volatility Chart
TEAC	Technical Analysis Chart
VOLC	Volatility Chart

ANALYTICS AND CALCS	
AVRG	Average Calculator
BRKD	Broken Dates
COPP	Currency Options Portfolio
COPS	Currency Options Strategy
COPT	Currency Options
CORR	Correlation Matrix
DEAN	Deposit Analysis
DEFO	Deposit vs FX Forwards Overview
FRAA	FRA Arbitrage Calculator
FRAP	FRA Pricing
FXBP	FX Spot Arbitrage
FXCM	FX Cross Matrix Calculator
FXCT	FX Carry Trade
FXCV	Best FX MM Curve
FXFT	FX Forwards from Futures
FXOC	FX Options Calculator
FXVE	FX Volatility Explorer
NDFX	Non-Deliverable Forwards Calculator
OISC	Overnight Index Swap
PARF	Par Forward Calculator
REGR	Regression Analysis
SPO	Swap Points and Outrights
SPOZC	Swap Points from ZC

MARKETS	
BGC	BGC Market Data Broker Guide
CIG	Currency Index Guide
EE	Economic Events
FXALL	Fxall
FXG	Foreign Exchange Guide
FXHEAT	FX Volume Heatmap
FXMM	FX & Money Views
FXOTCG	FX Options Guide
FXPOLL (e.g. "EUR= FXPOLL")	FX Polls View
FXTFOG	Foreign Exchange Traded Futures and Options Guide
HOL	World Exchange Holidays
HOME	Home page
ICAP	ICAP Guide
NDFO	Non-Deliverable Forwards and Outrights Guide
NDFV	NDF View
SPOTG	Spot Guide
TPB	Tullett Prebon Broker Guide

## Chapter 3: Foreign Exchange Market

SEARCHES	
ANSWERS	Eikon Answers
CURVESRCH	Curves – Advanced Search
FXMMSRCH	Money/Foreign Exchange – Advanced Search
SRCH	Advanced Search
TICK	Ticker

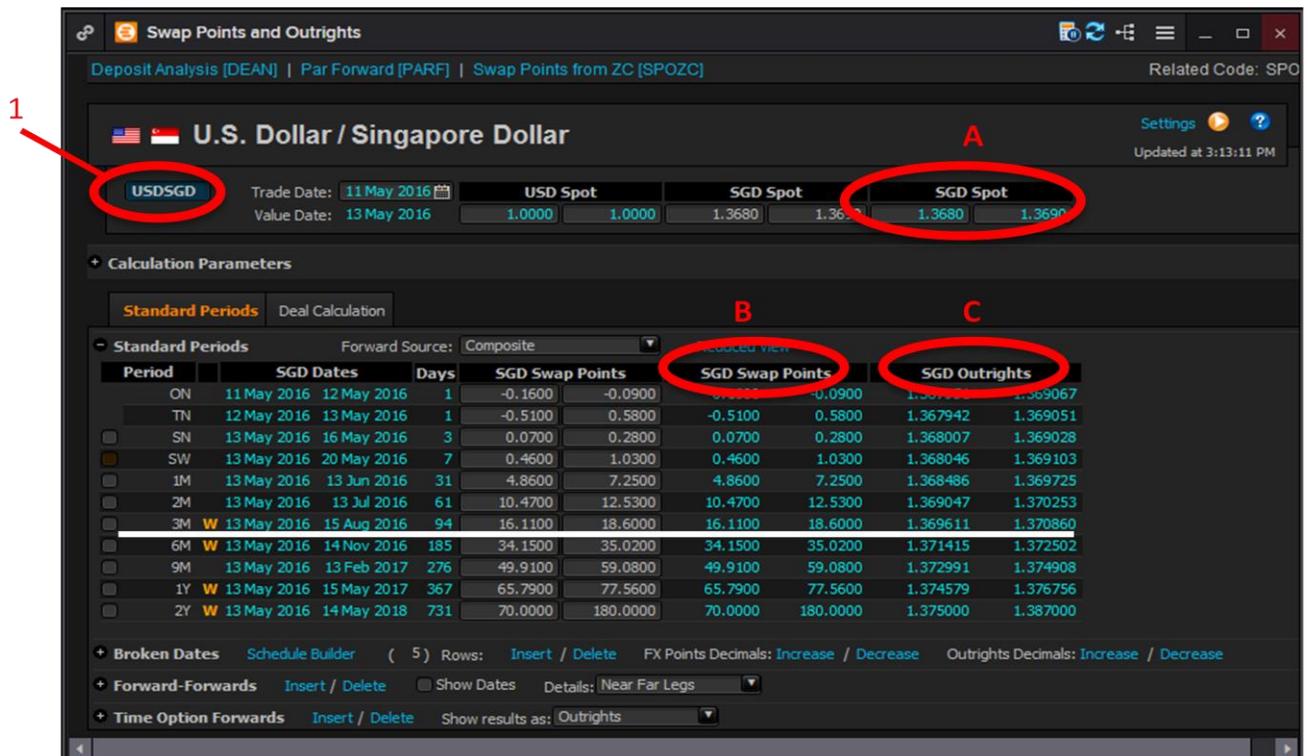
HELP	
FAQ	Frequently Asked Questions
HELP	Online Help

## 1. Swap Points and Outrights <SPO>

The Swap Points and Outrights Calculator would enable users to search for the relevant swap points and corresponding outright values for specific currency pairs.

Using this application, users can also customise the specific spot and swap points in order to calculate the corresponding FX Outright value.

In the Eikon Toolbar, search <SPO> to open the application



1. Key in the currency pair at 1 (i.e. <USDSGD>)
2. Locate the necessary period from the first column (i.e. 3M for 3 months)  
There are 3 main bid-ask figures which would be of interest.

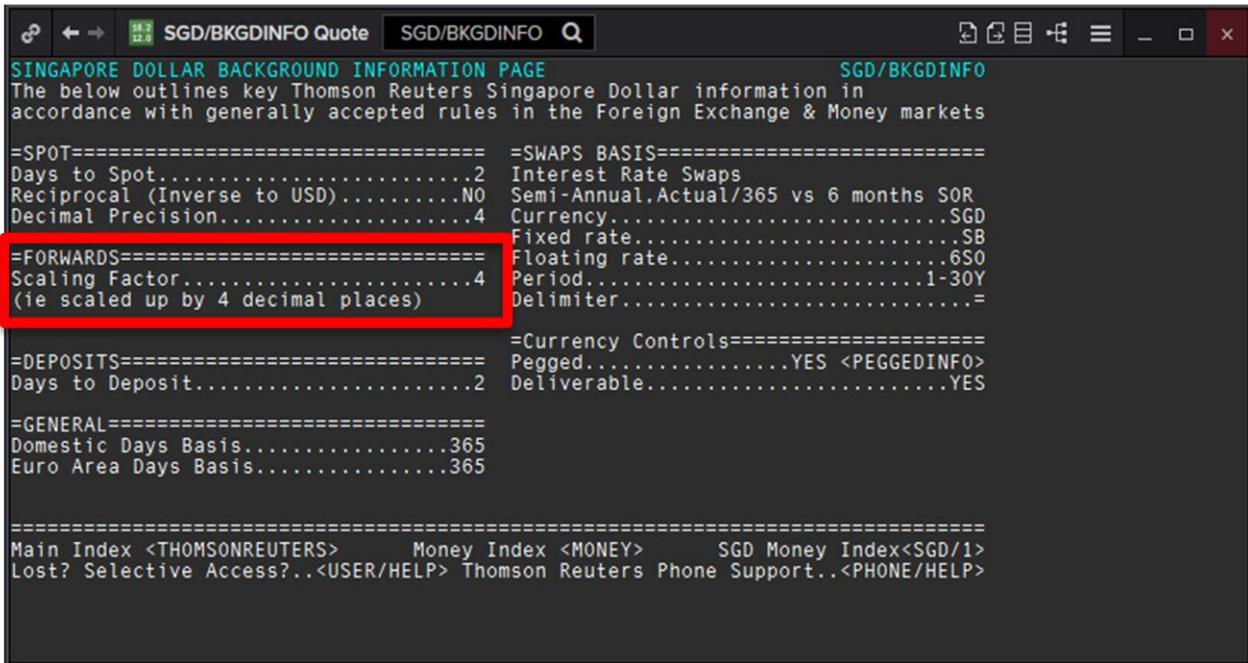
Figure	What it is	Alternative Methods to Obtain it
A	FX Spot Price	F4 > Search for spot price of currency e.g. <SGD=>
B	FX Swap Points	F4 > Search for forward swap points/rates e.g. <SGDFWD=>
C	FX Outrights	F4> Search for <0#SGDF=> or type <SGDF=> and press F3

## Scaling Factor

In the previous screenshot, the resultant outright price of USDSGD was not the sum of the corresponding FX spot price and FX swap points. This is due to the scaling factor of the SGD.

How to find the scaling factor of a currency?

1. In Eikon, press F4
2. Type in the country name (i.e. <Singapore> and select <Background Info>)



```

SGD/BKGDINFO Quote  SGD/BKGDINFO
SINGAPORE DOLLAR BACKGROUND INFORMATION PAGE  SGD/BKGDINFO
The below outlines key Thomson Reuters Singapore Dollar information in
accordance with generally accepted rules in the Foreign Exchange & Money markets

=SPOT=====
Days to Spot.....2
Reciprocal (Inverse to USD).....NO
Decimal Precision.....4

=FORWARDS=====
Scaling Factor.....4
(ie scaled up by 4 decimal places)

=DEPOSITS=====
Days to Deposit.....2

=GENERAL=====
Domestic Days Basis.....365
Euro Area Days Basis.....365

=====
Main Index <THOMSONREUTERS>      Money Index <MONEY>      SGD Money Index<SGD/1>
Lost? Selective Access?..<USER/HELP> Thomson Reuters Phone Support..<PHONE/HELP>
  
```

Here, Singapore has a scaling factor of 4 decimal places.

Hence, the following equation can be derived.

Deliverable FX Outrights = FX Spot Price + FX Swap Points / factor (if any)

Note:

Days to deposit (whether it is 1 or 2 days from trade date to spot date) can be found too.

## 2. Deposit Analysis <DEAN>

On the Deposit Analysis Calculator <DEAN>, users can find the implied deposit, deposit rates for different pairs of currencies.

First, Eikon uses certain terminologies.

**Target Currency:** This refers to the currency that is required at the end (the horizontal line of the previous diagram)

**Via Currency:** The currency that the implied deposit is carried through.

1. In the Eikon Toolbar, search <DEAN>
2. Select the target and via currency pair required
3. Match the period and the implied deposit for that particular date.
4. If required, you could select the broken date (e.g. 1M3D)

The screenshot displays the 'Deposit Analysis' tool for the Singapore Dollar / U.S. Dollar pair. The interface includes the following elements:

- Target CCY:** SGD (highlighted with a red box)
- Via CCY:** USD (highlighted with a red box)
- Trade Date:** 26 May 2016
- Value Date:** 31 May 2016
- SGD Spot:** 1.3757, 1.3760
- USD Spot:** 1.0000, 1.0000
- SGD/USD Spot:** 0.7267, 0.7269

**Calculation Parameters**

Buttons: Swap To Dep, Dep To Swap

Period	End Date	Days	SGD Swap Points	USD Deposit	SGD Implied Deposit	Spread	SGD Deposit
ON	6 May 2016 - 27 May 2016	1	0.0600, 0.1000	0.34, 0.44	0.50, 0.71	-58.27	0.02, 0.03
TN H	7 May 2016 - 31 May 2016	4	0.1700, 0.4700	0.42, 0.50	0.54, 0.82	17.14	0.55, 1.15
SN	1 May 2016 - 01 Jun 2016	1	-1.5700, 2.0000	0.48, 0.58	-3.68, 5.89	-54.62	0.50, 0.62
SW	1 May 2016 - 07 Jun 2016	7	0.0000, 1.2500	0.36, 0.46	0.37, 0.94	-9.25	0.50, 0.62
1M	1 May 2016 - 30 Jun 2016	30	3.5000, 5.0000	0.40, 0.50	0.72, 0.95	-14.72	0.62, 0.75
2M W	1 May 2016 - 29 Jul 2016	59	12.2500, 18.2500	0.78, 0.87	1.34, 1.70	-65.31	0.81, 0.93
3M	1 May 2016 - 31 Aug 2016	92	19.0000, 25.0000	0.63, 0.73	1.19, 1.46	-38.99	0.87, 1.00
6M	1 May 2016 - 30 Nov 2016	183	40.0000, 45.0000	0.93, 1.03	1.53, 1.70	-42.78	1.12, 1.25
9M	1 May 2016 - 28 Feb 2017	273	55.0000, 65.0000	1.23, 1.43	1.79, 2.09	-69.24	1.18, 1.31
1Y	1 May 2016 - 31 May 2017	365	74.0000, 83.0000	1.27, 1.37	1.83, 2.00	-60.65	1.25, 1.37
2Y	1 May 2016 - 31 May 2018	730	107.0700, 191.4400	1.77, 1.87	2.20, 2.62	-109.78	1.25, 1.37

Buttons: Broken Dates, Rows: Insert / Delete, FX Points Decimals: Increase / Decrease, Deposit Decimals: Increase / Decrease

### 3. Non Deliverable Forwards <NDFX>

Using the Non Deliverable Forwards Calculator, users can calculate the outright for non deliverable contracts.

1. In the Eikon Toolbar, search <NDFX>
2. Key in the Base and NDF Currency as indicated below (i.e. for USDKRW, USD is the base currency and KRW is the NDF currency, where the profiting party will receive the profit in USD terms at the end of the contract).
3. Look under the <USD/KRW Outrights> for the price of the FX NDF

However, one should note that non deliverable forward contracts are not available for all currencies. Hence, users can utilise the dropdown menu for the NDF Currency in order to choose the currency pair.

The screenshot shows the 'Non Deliverable Forwards' calculator interface. At the top, it displays 'U.S. Dollar / Korean Won' with a 'Settings' button and 'Updated at 3:13:52 PM'. Below this, the 'Base Currency' is set to 'USD' and the 'NDF Currency' is set to 'KRW', both highlighted with a red circle. The 'Trade Date' is '12 May 2016' and the 'Value Date' is '16 May 2016'. A table of spot rates is shown: USD Spot (1.0000), KRW Spot (Offshore) (1,165.4000), and USD/KRW Spot (1165.4000). Below this is the 'Calculation Parameters' section with 'Main' and 'FRAs' tabs. The 'Standard Periods' section shows 'NDF PIPs/NDFOR: NDF Outrights'. A table of results is displayed with columns for Period, USD/KRW Dates, Fixing Date, Days, KRW Outright, USD Deposit, KRW Deposit, USD/KRW Swap Points, and USD/KRW Outrights. The 'USD/KRW Outrights' column is highlighted with a red box. The 'NDS Source' is set to 'ICSG'.

Period	USD/KRW Dates	Fixing Date	Days	KRW Outright	USD Deposit	KRW Deposit	USD/KRW Swap Points	USD/KRW Outrights
SW	16 May 2016 23 May 2016	19 May 2016	7	1,165.400000	0.270	0.400	0.274 1.748	1,165.400000 1,166.000000
1M	16 May 2016 16 Jun 2016	14 Jun 2016	31	1,166.000000	0.590	0.690	1.205 1.609	1,166.000000 1,166.600000
2M	16 May 2016 18 Jul 2016	14 Jul 2016	63	1,166.600000	0.720	0.820	1.327 1.628	1,166.600000 1,167.300000
3M	16 May 2016 16 Aug 2016	11 Aug 2016	92	1,167.070000	0.770	0.870	1.350 1.622	1,167.070000 1,167.870000
6M	16 May 2016 16 Nov 2016	14 Nov 2016	184	1,168.070000	0.940	1.040	1.410 1.614	1,168.070000 1,168.970000
9M	16 May 2016 16 Feb 2017	14 Feb 2017	276	1,168.070000	1.090	1.290	1.411 1.694	1,168.070000 1,169.070000
1Y	16 May 2016 16 May 2017	12 May 2017	365	1,168.120000	1.260	1.350	1.514 1.666	1,168.120000 1,169.120000
2Y	16 May 2016 16 May 2018	14 May 2018	730	1,163.550000	1.580	1.680	1.520 1.683	1,163.550000 1,165.250000

### 4. FX Top of Book <TOB>

An application which enables users to view different currency pairs as well as their corresponding spot and forwards is the FX Top of Book <TOB> Application.

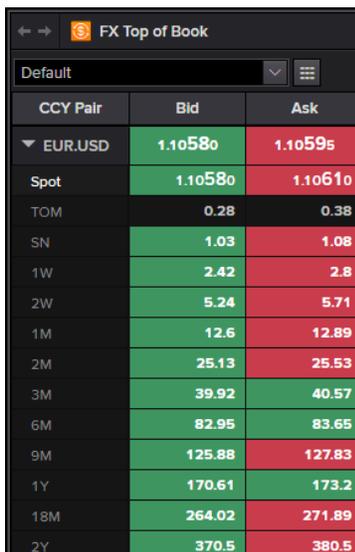
In the Eikon Toolbar, search <TOB>.

Press  in order to add new profiles (groups of currencies) or different currencies into a group.



EUR.USD (14:09:08)	JPY.USD (---:--)	SGD.USD (14:09:05)																																													
<table border="1"> <tr><th>Sell EUR</th><th>Buy EUR</th></tr> <tr><td>1.10</td><td>1.10</td></tr> <tr><td><b>632</b></td><td><b>649</b></td></tr> </table>	Sell EUR	Buy EUR	1.10	1.10	<b>632</b>	<b>649</b>	<table border="1"> <tr><th>Tenor</th><th>Bid</th><th>Ask</th></tr> <tr><td>Spot</td><td>0.0095880</td><td>0.0095900</td></tr> <tr><td>TOM</td><td>--</td><td>--</td></tr> <tr><td>SN</td><td>--</td><td>--</td></tr> <tr><td>1W</td><td>--</td><td>--</td></tr> </table>	Tenor	Bid	Ask	Spot	0.0095880	0.0095900	TOM	--	--	SN	--	--	1W	--	--	<table border="1"> <tr><th>Sell SGD</th><th>Buy SGD</th></tr> <tr><td>0.741</td><td>0.741</td></tr> <tr><td><b>600</b></td><td><b>800</b></td></tr> </table>	Sell SGD	Buy SGD	0.741	0.741	<b>600</b>	<b>800</b>																		
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KRW.USD (---:--)	CNY.USD (---:--)	CAD.USD (---:--)																																													
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EUR.SGD (14:09:07)	KRW.SGD (---:--)	KRW.JPY (---:--)																																													
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Alternatively select  for the following view of a table of spot and forward figures for the currencies within the profile group.



CCY Pair	Bid	Ask
EUR.USD	1.10580	1.10595
Spot	1.10580	1.10610
TOM	0.28	0.38
SN	1.03	1.08
1W	2.42	2.8
2W	5.24	5.71
1M	12.6	12.89
2M	25.13	25.53
3M	39.92	40.57
6M	82.95	83.65
9M	125.88	127.83
1Y	170.61	173.2
18M	264.02	271.89
2Y	370.5	380.5

## 5. FX Options Calculator <FXOC>

For calculating the option premium costs for:

1. Vanilla
2. Barrier
3. European Digital
4. Touches
5. Average
6. Lookback
7. Forward Start
8. Compound
9. Chooser
10. Vanilla Strategy
11. Multi-Leg Strategy (User Defined Strategy + Strip Builder)

Users are able to utilise the FXOC in order to find the option premium in a similar way as to how to utilise COPT.

The screenshot displays the FX Options Calculator interface with the following settings and values:

- Currency Pair:** USDJPY
- Current Rate:** 102.5100
- Target Rate:** 102.5400
- Spot Date:** Jul 01, 2016
- Option Type:** Vanilla
- Deal Type:** Buy
- Expiry Tenor / Date:** 1M, Aug 03, 2016 (33d)
- Delivery:** Aug 05, 2016 (31d)
- Style:** European
- Call/Put:** USD, Call
- Strike:** 102.3447
- Notional:** USD, 1,000,000
- MARKET DATA:**
  - ATM Vol (%): 13.188, 13.788
  - RR (%): 10D, -3.191, -1.941
  - BF (%): 10D, 1.150, 1.900
  - Fwd: Points, -9.8000, -9.4200
  - USD Depo (%): 0.750, 0.850
  - JPY Depo (%): -0.361, -0.218
- PRICING:** Black and Scholes
  - Volatility (%): 13.188, 13.788
  - Premium: USD, 16,090, 17,060
  - Premium Price (%): 1.6090, 1.7060
  - Premium Date: Spot, Jul 05, 2016
  - Delta (%): Spot, 50.119
  - Delta Notional (USD): 501,195
  - Vega (USD): 1,197

In the Eikon Toolbar, search <FXOC>

Adjust the following settings:

1. Currency Pair
2. Type of Strategy (e.g. Vanilla)
3. Buy or Sell
4. Expiry or Tenor
5. European or American
6. Call or Put

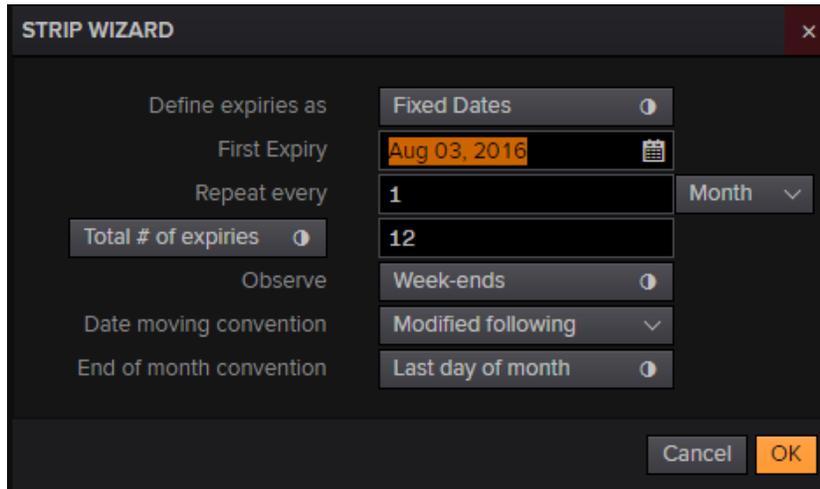
Note that the ATM Strike is by default the FX Outright at the end of the tenor.

### Strip Builder

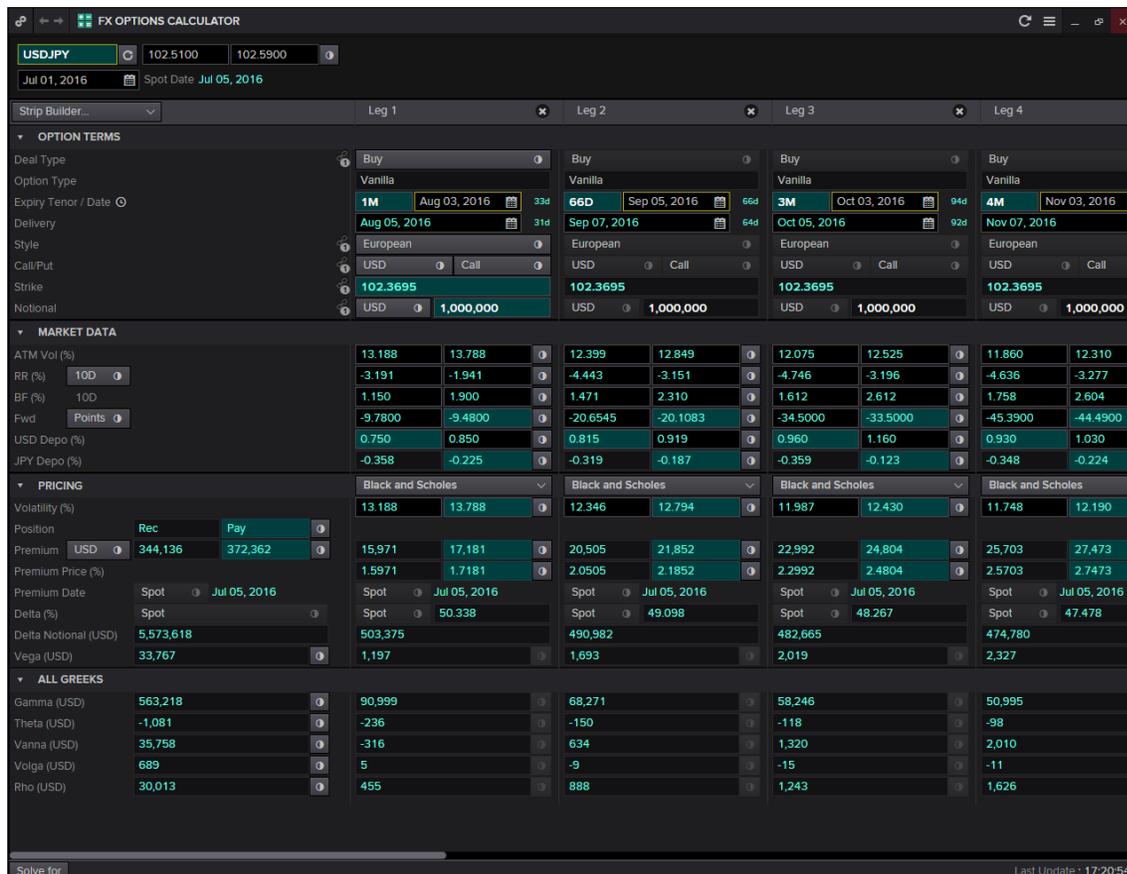
In order to build a series of options, users can utilise the strip wizard function in order to repeat the same option over and over again.

For example, using the previous Vanilla option, we wish to repeat this for 12 times every month.

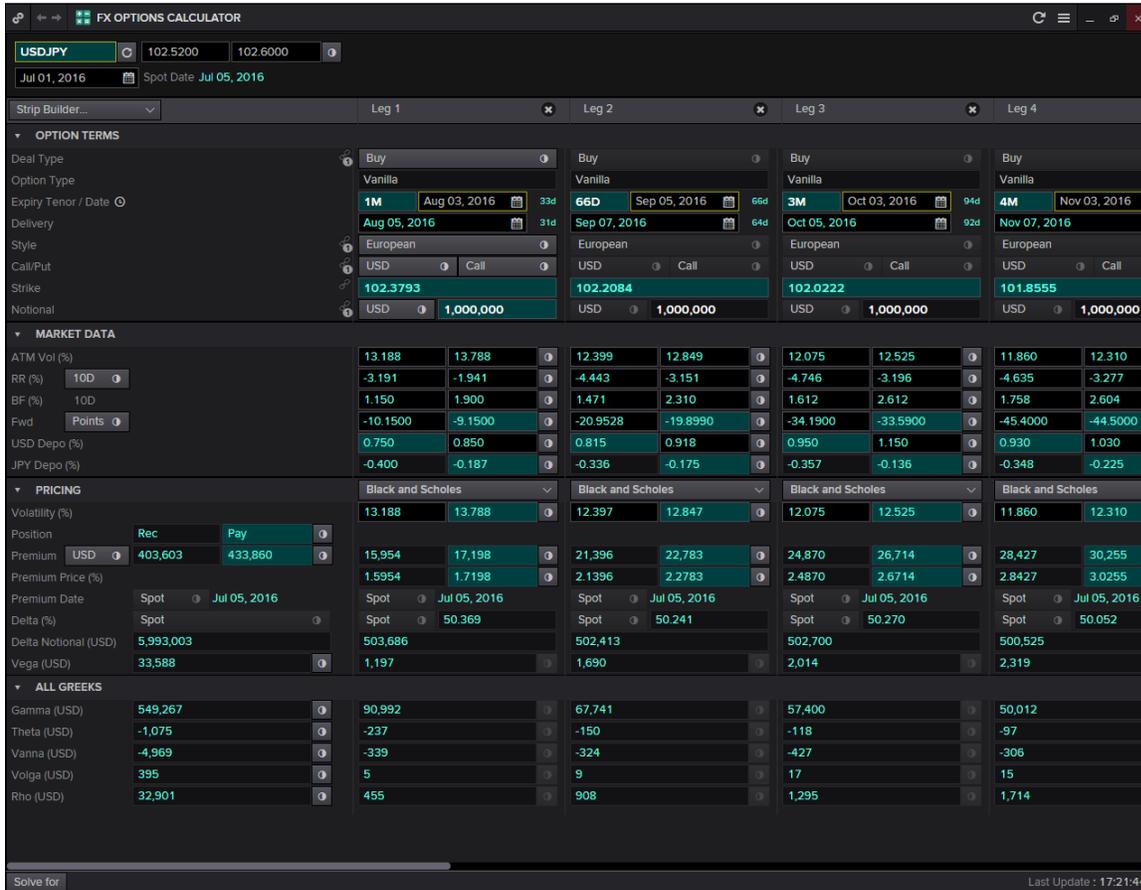
1. Select the Strip Builder through Multi-leg strategy>Strip Builder
2. In the following page, adjust the number of expires and the repetition frequency.



3. The following page will appear, with a series of options being repeated consecutively.



- By default, the calculator would synchronise all the strike prices to the same price. However, users are able to adjust this, by clicking on the  button at the strike row.
- This would cause the strike prices to unsynchronise and will now follow the FX outright price at each of the expiry dates.



The screenshot displays the FX Options Calculator interface for a USDJPY pair. It shows a multi-leg structure with four legs (Leg 1 to Leg 4). Each leg is configured with a Buy order, Vanilla option type, European style, and a USD Call option. The legs have different expiry dates and strike prices: Leg 1 (1M, Aug 03, 2016, 102.3793), Leg 2 (66D, Sep 05, 2016, 102.2084), Leg 3 (3M, Oct 03, 2016, 102.0222), and Leg 4 (4M, Nov 03, 2016, 101.8555). The notional for all legs is 1,000,000 USD.

The interface includes sections for Market Data, Pricing, and All Greeks. The Market Data section shows volatility, RR, BF, Fwd, and Depo rates for both USD and JPY. The Pricing section shows the Black and Scholes model used for each leg, with volatility and premium values. The All Greeks section lists Gamma, Theta, Vanna, Volga, and Rho for each leg.

Parameter	Leg 1	Leg 2	Leg 3	Leg 4
Deal Type	Buy	Buy	Buy	Buy
Option Type	Vanilla	Vanilla	Vanilla	Vanilla
Expiry Tenor / Date	1M Aug 03, 2016	66D Sep 05, 2016	3M Oct 03, 2016	4M Nov 03, 2016
Delivery	Aug 05, 2016	Sep 07, 2016	Oct 05, 2016	Nov 07, 2016
Style	European	European	European	European
Call/Put	USD Call	USD Call	USD Call	USD Call
Strike	102.3793	102.2084	102.0222	101.8555
Notional	USD 1,000,000	USD 1,000,000	USD 1,000,000	USD 1,000,000
ATM Vol (%)	13.188	12.399	12.075	11.860
RR (%)	-3.191	-4.443	-4.746	-4.635
BF (%)	1.150	1.471	1.612	1.758
Fwd	-10.1500	-20.9528	-34.1900	-45.4000
USD Depo (%)	0.750	0.815	0.950	0.930
JPY Depo (%)	-0.400	-0.336	-0.357	-0.348
Volatility (%)	13.188	12.397	12.075	11.860
Premium (USD)	403,603	21,396	24,870	28,427
Delta (%)	50.369	50.241	50.270	50.052
Gamma (USD)	549,267	67,741	57,400	50,012
Theta (USD)	-1,075	-150	-118	-97
Vanna (USD)	-4,969	-324	-427	-306
Volga (USD)	395	9	17	15
Rho (USD)	32,901	908	1,295	1,714

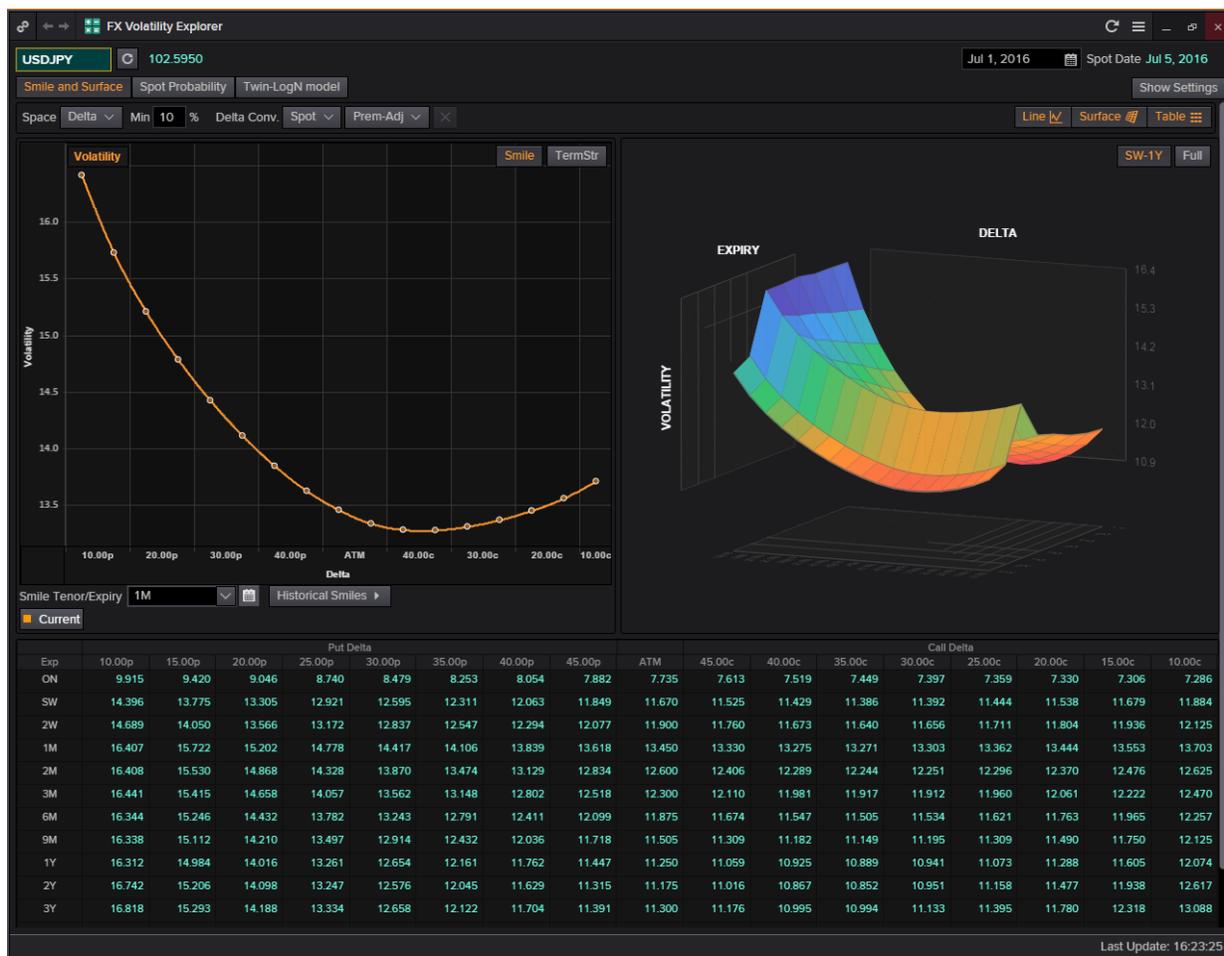
## 6. FX Volatility Explorer <FXVE>

Here, using the FX Volatility Explorer, users are able to view the FX implied volatility smiles (Volatility against Delta) at different expiries. Furthermore, the spot probabilities are provided in the second tab, where the different probabilities as well as the implied probability distributions are plotted. Here, the discrepancy between the implied distribution curve and the log-normal distribution curve, especially at the lower delta values would give rise to the “fat-tail effect” or the smile at the two ends of the implied volatility curve.

However, one should note that should the “fat tail effect” only occurs if the probability distribution of the implied and log-normal distribution differs. If not, a “smirk” like curve as seen below would be presented.

In order to utilise the <FXVE> application,

1. In the Eikon Toolbar, search <FXVE>
2. Choose your currency pair and view the different tenors and deltas in order to obtain the implied volatility of the option premium necessary.



## 7. Swap Data Repository View <SDRV>

SDRV is a reporting tool for OTC trades reported by financial institutions within the USA. The tool pulls in all declared swaps and options and this allows users to swap on all asset classes.

Information on this page is sourced from two repositories:

1. DTCC: The Depository Trust and Clearing Corporation.  
It is a US-based post-trade financial services company which provides clearing and settlement services to the financial markets.
2. CME: Chicago Mercantile Exchange  
It trades commodities and financial instruments using the open outcry format and the electronic trading through Globex.

In order to utilise the following page,

In the Eikon Toolbar, search for <SDRV> and choose from the different asset classes in order to view the trades available.

One way to view all the trades for a specific currency would be to select on the Notional Currency 1 or 2 to sort the results obtained.

Trade Date/Time	Ntnl CCY1	Ntnl Amt1	Ntnl CCY2	Ntnl Amt2	Strike	Transaction Type
2016-07-07 23:57:21		0		0		TRADE
2016-07-07 23:57:21		0		0		TRADE
2016-07-07 23:57:11		0		0		TRADE
2016-07-07 23:57:11		0		0		TRADE
2016-07-07 23:24:58	USD	5	JPY	510	102	TRADE
2016-07-07 23:17:36	GBP	434,783	USD	500,000	1.15	TERMINATION
2016-07-07 23:16:06	GBP	869,565	USD	1,000,000	1.15	TERMINATION
2016-07-07 23:14:14	GBP	277,778	USD	350,000	1.26	TERMINATION
2016-07-07 23:11:44	EUR	10,000,000	USD	11,000,000	1.1	TERMINATION
2016-07-07 23:09:12	GBP	5,223,881	USD	7,000,000	1.34	TERMINATION
2016-07-07 22:59:13	USD	11,000,000	CLP	7,535,000,000	685	TRADE
2016-07-07 22:58:12	USD	3,000,000	CLP	2,055,000,000	685	TRADE
2016-07-07 22:50:50	USD	440,000	JPY	42,240,000	96	TRADE
2016-07-07 22:15:01	USD	61,000,000		0		TRADE
2016-07-07 22:06:33	USD	66,000,000		0		TRADE
2016-07-07 22:01:45	AUD	100,662,252	USD	76,000,000	0.755	TRADE
2016-07-07 21:56:21	USD	30,000,000	MXN	565,350,000	18.845	TRADE
2016-07-07 21:50:23		0		0		TRADE
2016-07-07 21:49:20	USD	33,000,000	JPY	2,970,000,000	90	TRADE
2016-07-07 21:49:18	USD	59,000,000	JPY	5,310,000,000	90	TRADE
2016-07-07 21:24:05		0		0		TRADE
2016-07-07 21:19:31	AUD	150,000,000	JPY	11,340,000,000	75.6	TERMINATION
2016-07-07 21:19:15	AUD	150,000,000	JPY	11,340,000,000	75.6	TERMINATION
2016-07-07 21:19:06	AUD	95,000,000	JPY	6,745,000,000	71	TRADE
2016-07-07 21:19:06	AUD	100,946,372	JPY	8,000,000,000	79.25	TRADE
2016-07-07 21:18:29		0		0		AMENDMENT
2016-07-07 21:16:34	USD	61,000,000		0		TRADE
2016-07-07 21:12:39		0		0		AMENDMENT
2016-07-07 21:03:21	USD	380,000		0		AMENDMENT

## 8. Currency Performance/ Value Tracker <FXPT>

Using the Currency Performance/ Value Tracker application, users can compare how a specific currency performed historically and currently. While the 3 months implied volatility implies the market's sentiments on the currency pair currently, the 3 months realised volatility is the traded volatility 3 months ago.

Hence, comparing the two figures could be beneficial to an options buyer as to whether they should buy or sell an option right now.

In the Eikon Toolbar, search <FXPT>.

The screenshot shows the 'Currency Performance/Value Tracker' application interface. The table displays the following data:

Currency	Spot	3M Implied Vol	6M Implied Vol	1Y Implied Vol	3M Realized Vol	6M Realized Vol	1Y Realized Vol	3M Risk Reversal skew	6M Risk Reversal skew	1Y Risk Reversal skew
USDCAD	1.30	9.69	9.70	9.82	9.36	10.95	9.54	1.13	1.23	1.30
USDCHE	0.98	8.24	8.85	9.22	8.05	8.25	9.21	-1.02	-1.07	-1.02
USDJPY	100.69	12.85	12.45	11.90	14.97	13.13	10.85	-2.63	-2.60	-2.52
USDNOK	8.50	12.01	12.21	12.34	14.34	13.02	12.39	1.25	1.54	1.75
USDSEK	8.56	9.85	10.29	10.63	11.84	10.31	10.75	1.20	1.20	1.35
GBPUSD	1.29	13.80	13.30	12.76	20.64	16.45	12.73	-2.21	-2.41	-2.58
NZDUSD	0.73	13.05	13.15	13.25	13.87	14.09	13.62	-1.46	-1.76	-2.08
AUDUSD	0.75	11.71	11.95	12.25	13.51	13.23	12.25	-1.55	-1.85	-2.15
EURUSD	1.11	9.32	9.65	9.82	9.45	8.97	9.99	-1.40	-1.65	-1.86
EURAUD	1.47	10.85	11.05	11.30	9.82	11.57	13.38	0.96	1.23	1.70
EURCAD	1.44	9.78	10.09	10.47	8.25	10.84	12.03	0.17	0.20	0.25
EURCHF	1.08	6.25	6.80	7.00	5.81	5.06	5.48	-2.00	-2.10	-2.40
EURGBP	0.85	12.40	12.05	11.76	16.90	13.73	11.87	1.77	1.76	1.82
EURJPY	111.45	14.00	13.65	13.30	17.66	14.29	11.71	-3.15	-3.35	-3.50
EURNOK	9.41	8.70	8.85	8.93	8.17	8.94	9.77	1.13	1.32	1.48
EURNZD	1.53	11.65	11.61	12.18	10.60	11.53	14.01	0.79	1.07	1.57
EURSEK	9.48	6.60	6.91	7.17	6.08	5.93	6.40	0.69	0.71	0.75
GBP AUD	1.72	13.35	13.22	13.45	18.12	15.01	13.18	-1.55	-1.25	-0.90
GBP CAD	1.69	12.43	12.20	11.90	17.89	14.77	12.33	-2.13	-2.13	-2.15
GBP CHF	1.27	13.21	12.94	12.76	21.11	16.65	13.47	-3.05	-3.08	-3.13
GBP JPY	130.40	18.63	17.38	16.30	33.11	25.46	19.05	-4.33	-4.58	-4.92
CHF JPY	102.76	13.40	13.05	12.68	16.06	13.16	10.90	-1.35	-1.40	-1.48
AUD CAD	0.98	8.68	8.82	8.95	9.07	8.68	9.07	-0.38	-0.50	-0.50
AUD CHF	0.74	11.44	11.96	12.35	12.49	13.24	14.00	-2.08	-2.29	-2.60

For example,

Here, the 3M implied volatility for USDCAD is 9.69 while the 3M realised volatility is 9.36.

Hence the currency pair USDCAD is currently more volatile as compared to 3M ago.

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## Part 4: Money Market

## 1. Rates View Money Market <RVMM>

The Rates Views and Money Market pages enable users to have an overview of all different information commonly used in the money market.

For example, here key money market rates as well as basic swaps and interest rate forwards for different tenors could be found.

In the Eikon Toolbar, search <RVMM> in order to open the application.

One can also search which country or sector they would like to view in particular.

The screenshot displays the Eikon Money Market Rates View (RVMM) interface. At the top, there is a search bar and a 'Dashboard' label. Below this is a navigation bar with tabs for 'Rates', 'Spread Matrix', 'Country Spreads', 'Butterflies', 'Spreads', 'Money Mkts' (which is highlighted), 'Carry / RollDn', and 'Inflation'. Underneath the navigation bar are several country filters: 'World', 'Dashboard', 'Majors', 'Latam', 'APAC', 'Europe', 'Mideast+Africa', 'Scandi', 'United States', 'Germany', and 'Japan'. The main content area is divided into several sections:

- Minj Mkt Rates:** A table with columns for 'ON', 'Net', '1M', '2M', '3M', '6M', '9M', '1Y', and '1Y Net'. Rows include 'Bills', 'IBOR', 'Depos', 'OIS', 'FedFunds', 'CDs', 'Bas', 'Repos (Taj)', 'Repos (Age)', 'Repos (Mtg)', and 'FNMA DN'.
- TRADEWEB CP:** A table with columns for '1W', 'Net', '1M', '2M', '3M', '6M', '9M', '1Y', and '1Y Net'. Rows include 'CP AB \$ A1+P1', 'CP SOV A1P2', 'Basis Swaps', '3M vs 1M USDIUSD', and '6M vs 3M USDIUSD'.
- IR Forward:** A table with columns for 'Start', 'End', 'IBOR', 'Net', 'OIS', 'FRA', 'IBOR-OIS', and 'FRA-OIS'. Rows include '0X3', '1X4', '2X5', '3X6', '4X7', '5X8', '6X9', '9X12', 'IMM1', 'IMM2', 'IMM3', 'IMM4', 'CB Meet 1', and 'CB Meet 2'.
- ED:** A table with columns for 'ED', 'Price', 'dPrice', 'CisPrice', and 'Roll'. Rows include 'SEP6', 'DEC6', 'MAR7', 'JUN7', 'SEP7', 'DEC7', 'MAR8', 'JUN8', 'SEP8', 'DEC8', 'MAR9', 'JUN9', 'SEP9', 'DEC9', 'MAR0', and 'JUN0'.
- BILLS:** A table with columns for 'BILLS', 'BONDS', 'STRIPS', 'IRS', 'FF', and 'ECON'. Rows include '14 JUL 2016', '21 JUL 2016', '28 JUL 2016', '04 AUG 2016', and '11 AUG 2016'.
- KEY RATE \$:** A table with columns for 'Last', 'ECON Period', 'Post', and 'Actual'. Rows include 'U8 DISCOUNT', 'FF TARGET', 'FF EFFECT', 'U8 PRIME', and 'U8 DOLLAR IDX'.

On the right side of the interface, there are several panels: 'Hint: right-click on a row to ...', 'SPOT' table with columns 'Bid / Ask' and 'Net Chg', 'EUROBOP' table with columns 'Bid / Ask' and 'Net Chg', 'United States' section with 'Eq Index' and 'D.Jones', and 'TIME 23:19 NEW YORK'. At the bottom right, there is a 'Hint: right-click o...' and a 'COMMOITY' table with columns 'Last' and 'NET'.

## 2. Swap Pricer <SWPR>

### How to price a new IRS deal

One way to price a new IRS deal is to use the Swap Pricer to set the different parameters in order to generate the fixed rate which should be paid by the fixed rate payer.

The screenshot displays the Swap Pricer Calculator interface with the following configuration:

- Deal:** USD Pay US Dollar Fixed 1M Semi-Annual Bond 30/360 | Receive US Dollar Float 1M Quarterly MM Act/360 In Advance
- Parameters:**
  - Currency: USD
  - Collateral Type: Collateralized
  - Swap Type: Vanilla: Fixed - Float
  - Structure: American Semi-Annual Bond Basis vs 3-Mo...
  - Leg 1 Notional: 1,000,000.00
  - Leg 2 Notional: 1,000,000.00
  - Start Date: May 31, 2016
  - Maturity Date: Jun 1, 2021
  - Discount Curve: USD - LIBOR - Swap vs OIS...
- 1st Leg (Payer):**
  - Element Type / Pay Freq: Fixed / Semi-Annual
  - Start / End Date: May 31, 2016 / Jun 1, 2021
  - Cpn. / Accrued Type: Bond 30/360 / Bond 30/360
  - Fixed Rate (%): 1.3445
  - Market Value: -65,527.00
- 2nd Leg (Receiver):**
  - Element Type / Pay Freq: Float / Quarterly
  - Start / End Date: May 31, 2016 / Jun 1, 2021
  - Underlying / Reset Type: Fixing / In Advance
  - Index Name / Fixing Date: LIBOR / May 26, 2016
  - Index Tenor / Reset Freq: 3M / Quarterly
  - Cpn. / Accrued Type: MM Act/360 / MM Act/360
  - Spread (bp): 0.00
  - Market Value: 65,527.00
- SWAP RESULTS:**
  - NPV: 0.00
  - Market Value: 0.00
- RISK:**
  - DV01: -481.29
  - Modified Duration: -4.74

In the Eikon Toolbar, type <SWPR> (PREVIEW SWPR)

As shown above, set the necessary parameters for

1. Currency type (must be collateralized as per new FRS specifications)
2. Swap Type
3. Structure
4. Notional
5. Solving for 1<sup>st</sup> Leg (Payer of fixed rate in this case)

See the fixed rate for today and the market value of the IRS today.

If a spread is to be imposed, it could be included as shown in the blue box above.

## How to price an existing IRS deal

If either party wishes to cancel the IRS deal halfway through the tenor, the SWPR calculator could be used to calculate the penalty that should be paid (by other sign as shown by the sign of the NPV)

Here is an example that continues from the previous screenshot.

Assuming that the start date of the contract was on January 14, 2015, where a 2% fixed rate was agreed upon. Today is 26/5/2016.

The screenshot displays the Swap Pricer Calculator interface. Key elements include:

- Contract Details:** USD, Pay US Dollar Fixed 1M Semi-Annual Bond 30/360, Receive US Dollar Float 1M Quarterly MM Act/360 In Advance. Swap Type: Vanilla: Fixed - Float. Start Date: Jan 14, 2015. Valuation Date: May 26, 2016. Tenor: 5Y. Maturity Date: Jan 14, 2020. Leg 1 Notional: 1,000,000.00, Leg 2 Notional: 1,000,000.00.
- 1ST LEG (Pay):** USD, FIXED, Interest Rate, Notional. Element Type / Pay Freq: Fixed, Semi-Annual. Start / End Date: Jan 14, 2015, Jan 14, 2020. Cpn. / Accrued Type: Bond 30/360, Bond 30/360.
- 2ND LEG (RECEIVE):** USD, FLOAT, Interest Rate, Notional. Element Type / Pay Freq: Float, Quarterly. Start / End Date: Jan 14, 2015, Jan 14, 2020. Underlying / Reset Type: Fixing, In Advance. Index Name / Fixing Date: LIBOR, Apr 12, 2016. Index Tenor / Reset Freq: 3M, Quarterly. Cpn. / Accrued Type: MM Act/360, MM Act/360.
- VALUATION:** NPV: -33,543.69. Premium: -3.35. Par Rate (%): 1.1438. Principal Value: -26,954.63. Accrued: -6,589.06. Market Value: -33,543.69.
- LEG RESULTS:**

Item	1ST LEG	2ND LEG
Fixed Rate (%)	2.0000	
Spread (bp)	0.00	0.00
NPV / Premium	-78,352.10	44,808.41
Accrued	-7.84	734.53
Market Value	-7,323.60	44,073.88
Market Value (Total)	-71,028.51	
- RISK:**

Item	1ST LEG	2ND LEG
PVBP / DV01	-14.48	-330.08
Mod. Dur. / BP DV01	3.46	0.13
Annuity / BP Annuity	391.76	0.00

Hence, in the SWPR, we would change the following information.

1. Change the start date to the date of the contract (here 14/1/2015)
2. Change the fixed rate agreed upon (i.e. 2%)
3. Change the "Solve for" to NPV
4. Find the NPV of the IRS. Here the value is negative and hence the payer of the fixed rate would have to pay for the cancellation of the IRS deal.

Similarly a spread could be added if needed.

### 3. STIR Futures <STIR>

STIR Futures (Short Term Interest Rate Futures) work in the same way as Forward Rate Agreements (FRAs) with one key difference.

Whereas FRAs are bought in the over the counter market and can be customized, STIR futures are exchange traded and hence cannot be customized.

In the Eikon Toolbar, search <STIR> in order to open the following application and enter the specific currency to find the futures available.

The screenshot displays the Eikon software interface for STIR Futures. It is divided into two main sections: Singapore Dollar and U.S. Dollar.

**Singapore Dollar Section:**

- Trade Date: 18 May 2016, Value Date: 20 May 2016
- Contract: SGD / SSD (highlighted with a red box)
- IMM Contracts (selected)

**U.S. Dollar Section:**

- Trade Date: 18 May 2016, Value Date: 20 May 2016
- Contract: USD / ED (highlighted with a red box)
- IMM Contracts (selected)
- Contract Terms: CME/ED
- Mean Reversion (%): 1.58
- Volatility (%): 0.93
- Apply Adjustment: No

**Calculation Parameters:**

- Synthetic Forward
- Input Curves: Cash Rate: 0.626, Stub Rate: 0.569
- Select Price: Bid, Rate Style: 1Y: MM Actual/360

**Futures Table (U.S. Dollar):**

Period	Start	Futures	Last	Imp. Rate
M6	15 Jun 16	99.330	99.333	0.007
U6	21 Sep 16	99.200	99.205	0.008
Z6	21 Dec 16	99.100	99.105	0.009
H7	15 Mar 17	99.030	99.035	0.010
M7	21 Jun 17	98.965	98.970	0.010
U7	20 Sep 17	98.905	98.910	0.011
Z7	20 Dec 17	98.835	98.840	0.012
H8	21 Mar 18	98.785	98.790	0.012
M8	20 Jun 18	98.730	98.735	0.013
U8	19 Sep 18	98.680	98.685	0.013
Z8	19 Dec 18	98.620	98.625	0.014
H9	20 Mar 19	98.580	98.585	0.014
M9	19 Jun 19	98.535	98.540	0.015
U9	18 Sep 19	98.485	98.490	0.015
Z9	18 Dec 19	98.430	98.435	0.016
H0	18 Mar 20	98.385	98.390	0.016
M0	17 Jun 20	98.335	98.340	0.017
U0	16 Sep 20	98.280	98.285	0.017
Z0	16 Dec 20	98.225	98.230	0.018
H1	17 Mar 21	98.180	98.185	0.018

**Broken Dates Table:**

Start Date	End Date	Days	Near Date	Near Rates	Far Date	Far Rates	Synthetic Fwd Rates
1M	4M	92	20 Jun 16	0.572	20 Sep 16	0.651	0.677
3M	4M	29	22 Aug 16	0.630	20 Sep 16	0.651	0.717
1M15D	4M15D	92	05 Jul 16	0.589	05 Oct 16	0.662	0.698
8M	12M	122	20 Jan 17	0.734	22 May 17	0.804	0.941

Futures usually trade during the IMM dates of March, June, September and December.

When hovering over the month in the **ED Page** in Quotes, (Press F4, type “ED:” and hit F3, a code such as EDZ6 could be seen. Here, Z is the month code and 6 represents the year (in this case 2016).

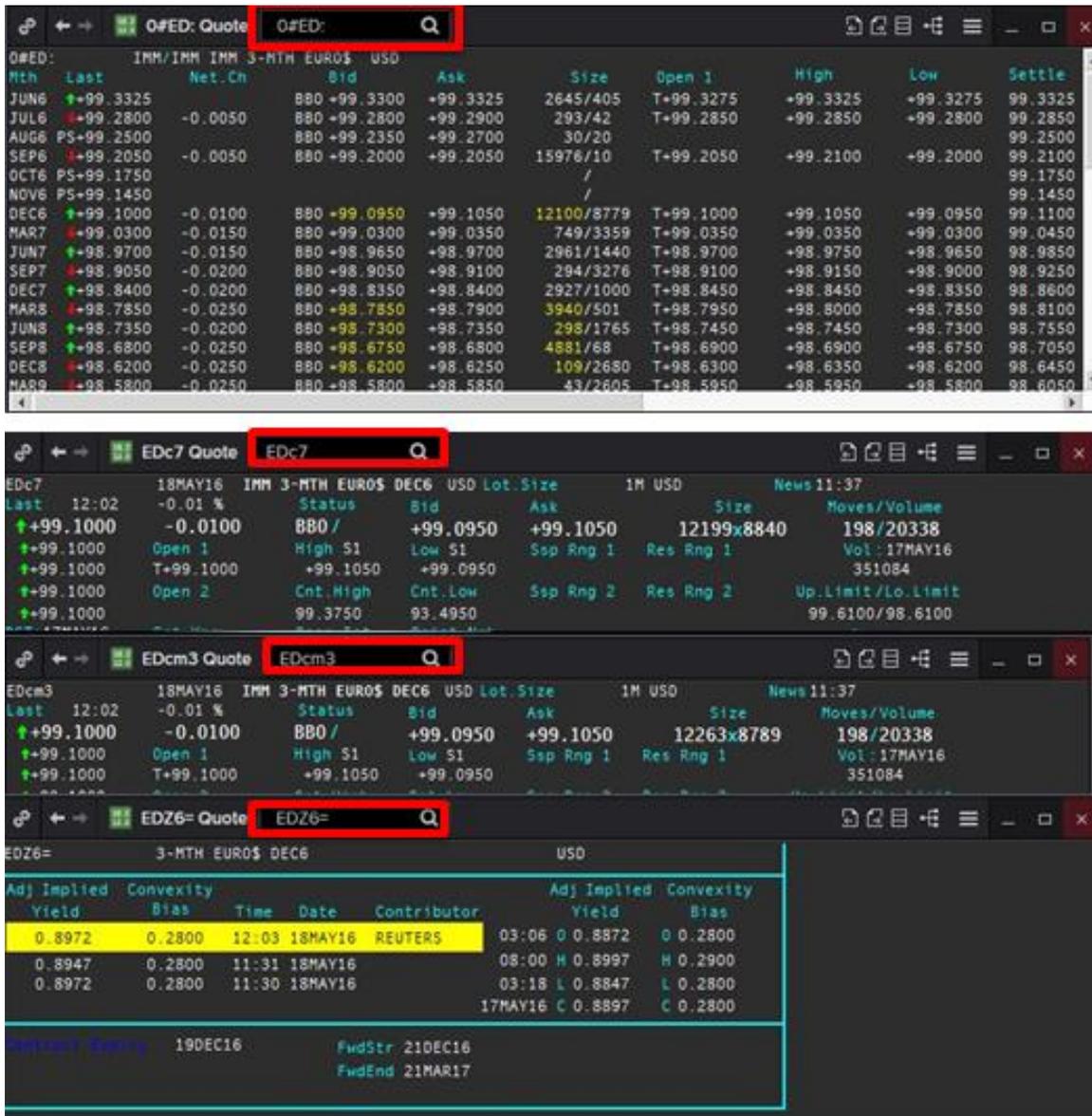
However, this is not the only way to generate information about the details of that contract. There are three different ways for us to generate the information.

<EDZ6>: Where Z is the month code and 6 is the last digit of the year

<EDcm3>: These are for IMM dates (the next quarterly contract) being cm1)

<EDc1>: These are for monthly contracts (the nearest monthly contract)

If <EDZ6=> is typed, a more detailed page could be obtained, as seen from the picture.



## 4. FRA Pricing <FRAP>

Eikon uses 2 main ways to price a FRA.

1. Futures
2. Zero Coupon Curve

In the Eikon Toolbar, search <FRAP> in order to open the FRA Pricing Calculator.

The screenshot displays the Eikon FRA Pricing Calculator for Singapore Dollar (SGD). The currency is set to SGD, with a trade date of 23 May 2016 and a value date of 25 May 2016. The calculation parameters are set to 3M, Futures pricing, and SSD contract. The input curves section shows cash and stub rates. The main table displays a list of FRA periods with their start and end dates, bid and ask discount factors (DF), and implied and real-time rates.

Period	Start Date	End Date	Bid DF	Ask DF	Implied FRAs	Real-Time FRAs
1X4	15 Jun 16	21 Sep 16			0.850	1.033
4X7	21 Sep 16	21 Dec 16			0.903	1.080
7X10	21 Dec 16	15 Mar 17			0.952	1.124
10X13	15 Mar 17	21 Jun 17			1.003	1.170
13X16	21 Jun 17	20 Sep 17			1.056	1.218
16X19	20 Sep 17	20 Dec 17			1.107	1.264
19X22	20 Dec 17	21 Mar 18			1.159	1.310
22X25	21 Mar 18	20 Jun 18			1.210	1.356
25X28	20 Jun 18	19 Sep 18			1.262	1.403
28X31	19 Sep 18	19 Dec 18			1.314	1.449
31X34	19 Dec 18	20 Mar 19			1.367	1.496
34X37	20 Mar 19	19 Jun 19			1.419	1.543
37X40	19 Jun 19	18 Sep 19			1.472	1.591
40X43	18 Sep 19	18 Dec 19			1.525	1.638
43X46	18 Dec 19	18 Mar 20			1.578	1.686

Here, enter the required currency as well as the method of pricing and the time periods necessary.

IMM Dates Convention

- H= March
- M= June
- U = September
- Z = December

These are the months that FRA contracts usually trade (each with 3 months tenors). Hence, although FRAs can commonly be traded in almost all months in a year, predominantly, a high number of trades occur during these months.

**Implied FRAs** is the bid and ask rate of interest that the FRA predict will be the spot rate at the date of maturity and hence would be the values used to trade.

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## Part 5: Bonds

# Eikon shortcuts: Fixed Income

APPS & TOOLS FOR INDIVIDUAL BONDS	
Note: In order to see the tools select the bond by hitting the down arrow and then hit the <space> bar. e.g. "US10YT=RR Q"	
DESC	Basics
Q	Quote
CHT	Chart
NEWS	Issuer News
ALQB	All Quotes
HOLD	Holdings
CALC	Bond Calculator
QH	History
DS	Debt Structure
NOTE	Notes
OV	Overview
SCHD	Payments
RES	Research
VALS	Valuations

MARKETS	
HOME	Home page
CNV	Convertibles Guide
CORP	Corporate Bond Guide
EE	Economic Events Monitor
CMO	ABS and CMOs Guide
CRDE	Credit Derivatives Guide
CREDIT	CreditViews
GOV	Government Bond Guide
IFR	IFR Markets Guide
IRD	Interest Rate Derivatives Guide
LOANS	Loans Guide
MBS	Mortgage Backed Securities Guide
MBSDB	MBS Dashboard
MUNI	Municipal Bonds Guide
BGC	BGC Market data Broker Guide
GFI	GFI Broker Guide
ICAP	ICAP Guide
MAX	MarketAxess Guide
TRAD	Tradition Broker Guide
TW	Tradeweb Guide

REAL TIME MONITORING	
ALLQ	All Quotes
Q	Quote
QL	Quote List
QLI	Quote Line
MON	Monitor
TAS	Time & Sales
TICK	Ticker
OPW	Option Watch

CALCULATORS & CHARTS	
ALLQ	All Quotes
ASWP	Asset Swap Calculator
AVRG	Average Calculator
BNDC	Bond calculator
BDFU	Bond Futures
BDHG	Bond Hedge
BDRE	Bond Repo
BDRN	Bond Return
BDST	Bond Strategy
CAPF	Cap and Floor
CDSV	Credit Default Swap
CONV	Convertible
CORR	Correlation Matrix
FRN	FRN
FWDC	Forward Curve
FRAA	FRA Arbitrage
MBSD	MBS Dollar Roll
OASC	Option Adjusted Spread Calculator
REGR	Regression Analysis
RVBC	Relative Value Basis Chart
STIR	STIR Futures
SWCM	Swap Curve Monitor
SWPN	Swaption
SWPR	Swap Pricer
TEDC	TED Spread
ZCBR	ZC Builer
HRA	Historical Return Analysis
MACROX	Macro Explorer

CHARTING	
CHT	Chart
CBOOK	Datastream Chartbook
CDSC	Credit Default Swap chart
CURV	Curve chart
ECOC	Economic Indicator Chart
REBC	Rebasing Chart
RVBC	Relative Value chart
TEAC	Technical Analysis Chart
VOLC	Volatility Chart

SEARCHES	
MBSSRCH	Agency Pools and TBAs
BNDFOSRCH	Bond and STIR Futures and Options
BNDREPOSCH	Bond Repos
CMOSRCH	CMOs/ABS
CDSWSRCH	Credit Default Swap Indices
CDSSRCH	Credit Default Swaps
CURVESRCH	Curves
GOVSRCH	Government and Corporate Bonds
LOANSSRCH	Loans
IRDOTCSRCH	OTC Interest Rate Derivatives
MUNISRCH	US Municipals
ECONSRCH	Economic Indicators
FUTSRCH	Futures Search
OPTSRCH	Options Search

NEWS	
NEWS	News Monitor
TOPNEWS	Top News
IFR	IFR Markets
BRV	Reuters BreakingViews

PORTFOLIO MANAGEMENT	
PORT	Portfolios and Lists
DASH	Portfolio Dashboard
CPA	China Portfolio Analytics
BMON	Bond Monitor
CDSMON	CDS Monitor
SWPO	Swap Portfolio

HELP	
FAQ	Frequently Asked Questions
HELP	Online Help



## 1. Bond Calculator <BNDC>

On Eikon, users can calculate the bond price, as well as the different types of yields, the clean and dirt price as well as the accrued interest for the next coupon.

The screenshot displays the Fixed Rate Bond Calculator (FRB) interface for HSBC BANK PLC. The bond details include: HSBC BANK PLC, FIXED, 5.300%, JUL 12, 2016, AUD, F1+ (FDT Jun 14, 2016), MTN, ISIN: XS0644135039. The interface is divided into several sections:

- SETTLEMENT:** Trade Date: Jun 15, 2016; Settlement Date: Jun 17, 2016 (2 WD Default).
- PRICING:** Clean Price (%): 100.19750000; Yield 1: 2.336168; Yield 2: 2.401563; Redemption Date: Jul 12, 2016 - Maturity - YTM; Redemption Price: 100.0000; Accrued: 4.931944444 (30E/360); Dirty Price (%): 105.12944444.
- COUPON:** Previous / Next: Jul 13, 2015 - Jul 12, 2016; Frequency: Annual; Next Ex-Dividend: Jul 12, 2016; Rate (%): 5.300.
- Cash Flows Table:**

Date	Annual Rate (%)	Income (%)	Paid Coupon
Jul 12, 2012	5.3000	5.3147	5.3147
Jul 12, 2013	5.3000	5.3000	5.3000
Jul 14, 2014	5.3000	5.3000	5.3000
Jul 13, 2015	5.3000	5.3000	5.3000
Jul 12, 2016	5.3000	105.3000	

As there are different ways to calculate the yield to maturity, depending on the days required (360, 365 or actual) as well as different market conventions, one can make use of the Bond Calculator application <BNDC> in order to find the different yields to maturity.

1. In the Eikon Toolbar, search for <BNDC>
2. In the In-app search bar, search for the bond needed through the ticker coupon maturity convention or the ISIN Code of the bond
3. In the Yield tab, you could search for the different yield types. The native option would display the most common convention for the specific bond
4. The Cashflow tab would display the cashflow payments for the entire life of the bond.

## 2. Fixed Income New Issue Monitor <FINIM>

One page that many users will refer to is the Fixed Income New Issues Monitor. On this page, different new issues generated from the IFR Market News will be consolidated.

New issues at the rumour phrase will be consolidated and news will be reported through the road show till the time of pricing.

In the Eikon Toolbar, search <FINIM>

Updated	Issuer Name	ISIN / Cusip	Term to Ma...	CPN	Deal Status
08-Jul-2016 11:06	LANDMARK FUNDING 2016 LTD	-	3Y	-	PRICE GUIDAN
08-Jul-2016 10:09	INDUSTRIAL AND COMMERCIAL BAN...	-	-	-	MANDATE
08-Jul-2016 06:57	TRANSOCEAN INC	893830BE8	7Y	9%	PRICED
08-Jul-2016 05:26	BAHIA SUL HOLDINGS GMBH	05674XAA9	10Y	5.75%	PRICED
08-Jul-2016 05:18	SUMITOMO MITSUI FINANCIAL GROU...	86562MAE0	5Y	2.058%	PRICED
08-Jul-2016 05:18	SUMITOMO MITSUI FINANCIAL GROU...	86562MAF7	10Y	2.632%	PRICED
08-Jul-2016 04:53	PETROBRAS GLOBAL FINANCE BV	-	5Y	8.375%	PRICED
08-Jul-2016 04:53	PETROBRAS GLOBAL FINANCE BV	71647NAQ2	10Y	8.75%	PRICED
08-Jul-2016 04:20	CARE CAPITAL PROPERTIES INC	14162VAA4	10Y	5.125%	PRICED
08-Jul-2016 04:07	TRANSOCEAN INC	893830BE8	7Y	-	LAUNCHED
08-Jul-2016 03:40	AMERICAN HONDA FINANCE CORP	02665WBE0	3Y	1.2%	PRICED
08-Jul-2016 03:40	AMERICAN HONDA FINANCE CORP	US02665WBF7...	5Y	1.65%	PRICED
08-Jul-2016 03:28	TRANSELEC SA	US89366LAE48	13Y	3.875%	PRICED
08-Jul-2016 03:26	INDUSTRIAL AND COMMERCIAL BAN...	-	3Y	1.875%	PRICED
08-Jul-2016 03:20	RAYMOND JAMES FINANCIAL INC	754730AE9	10Y	3.625%	PRICED
08-Jul-2016 03:20	RAYMOND JAMES FINANCIAL INC	754730AF6	30Y	4.95%	PRICED
08-Jul-2016 03:14	SUNOCO LOGISTICS PARTNERS OPE...	86765BAT6	10Y	3.9%	PRICED
08-Jul-2016 03:04	WALT DISNEY CO	25468PDN3	30Y	3%	PRICED
08-Jul-2016 03:04	WALT DISNEY CO	25468PDM5	10Y	1.85%	PRICED
08-Jul-2016 03:04	WALT DISNEY CO	25468PDL7	3Y	0.875%	PRICED
08-Jul-2016 02:58	BACARDI LTD	067316AD1	10Y	2.75%	PRICED
08-Jul-2016 02:46	HKT CAPITAL NO. 4	-	10Y	3%	PRICED
08-Jul-2016 02:33	FEDERAL REALTY INVESTMENT TRUST	313747AX5	30Y	3.625%	PRICED
08-Jul-2016 02:32	XIANGYU INVESTMENT (BV) CO LTD	XS1434120165	3Y	4.75%	PRICED
08-Jul-2016 02:22	HT GLOBAL IT SOLUTIONS HOLDING...	-	5Y	7%	PRICED
08-Jul-2016 02:18	EVGRN 2016-2	-	-	-	PRICED
08-Jul-2016 01:44	PETROBRAS GLOBAL FINANCE BV	-	5Y	8.375%	LAUNCHED
08-Jul-2016 01:44	PETROBRAS GLOBAL FINANCE BV	71647NAQ2	10Y	8.75%	LAUNCHED
08-Jul-2016 01:27	SUMITOMO MITSUI FINANCIAL GROU...	86562MAE0	5Y	-	LAUNCHED
08-Jul-2016 01:27	SUMITOMO MITSUI FINANCIAL GROU...	86562MAG5	5Y	-	PRICED
08-Jul-2016 01:27	SUMITOMO MITSUI FINANCIAL GROU...	86562MAG5	5Y	-	LAUNCHED
08-Jul-2016 01:27	SUMITOMO MITSUI FINANCIAL GROU...	86562MAF7	10Y	2.632%	LAUNCHED
08-Jul-2016 01:16	SUMITOMO MITSUI FINANCIAL GROU...	-	3Y	-	LAUNCHED
08-Jul-2016 00:56	SUMITOMO MITSUI FINANCIAL GROU...	15UAD6	10Y	3.5%	PRICED
08-Jul-2016 00:53	SUMITOMO MITSUI FINANCIAL GROU...	-	5Y	-	PRICE GUIDAN

In the page, you are able to adjust the following information about the issues.

1. Deal Status
2. Characteristic
3. Currency of Issue
4. Domicile of Issuer
5. Issuer Name
6. Sector or Subsector
7. Whether it has been updated in the past x days (e.g. 30 days)

Also, users who are looking at all new issues (not limited to the IFR page) can select “All New Issues” for all different types of issues available in the system.

### 3. Rates Views <RV>

Rates Views give users a quick and easy access to a whole range of key screens for them to monitor rates activity; identify trade opportunities and its optimal allocation, track the global market from a single page and to monitor Tradeweb prices and gauge market direction and latest movements.

In the Eikon Toolbar, search <RV> in order to open the application.

In addition to providing data, Rates Views also contain several inbuilt tools to aid users' decision making. They can:

- Chart historical time series and technical analyses for any data field in the page
- Access related news headlines
- Create custom lists of instruments or strategies
- Create and initiate multi-security trades
- Integrate data into their workplace.

## 4. Bond Monitor <BMON>

One useful application on Eikon is the Bond Monitor application. Using this application, users can monitor a series of bonds, such as the different benchmark, treasury, issuer bonds etc on one page.

The screenshot displays the Bond Monitor application interface. The main window title is "MONETARY AUTHORITY OF SINGAPORE 0.000% 5 Aug 2016". The interface includes a sidebar with "Predefined Lists" for various regions like AMERS, APAC, and EMU. The main area shows a table of bonds with columns for Bond ID, Bond Type, Ticker, Issuer, Cpn (%), Maturity, Ccy, Face Amount, Accrued, Price, and Contributor. The table lists 20 bonds, all with a face amount of 1,000,000.00 and a coupon rate of 0.000%.

Bond ID	Bond Type	Ticker	Issuer	Cpn (%)	Maturity	Ccy	Face Amount	Accrued	Price	Contributor
SGML16118N=	FRB	MOYTA	MONETARY AUTHORITY OF SINGAPORE	0.000	8/5/2016	SGD	1,000,000.00	0.00	99.95950000	HSBC MARKETS Other
SGML16122X=	FRB	MOYTA	MONETARY AUTHORITY OF SINGAPORE	0.000	9/2/2016	SGD	1,000,000.00	0.00	99.91100000	HSBC MARKETS Other
SGML16126A=	FRB	MOYTA	MONETARY AUTHORITY OF SINGAPORE	0.000	9/30/2016	SGD	1,000,000.00	0.00	99.85550000	HSBC MARKETS Other
SGML16113E=	FRB	MOYTA	MONETARY AUTHORITY OF SINGAPORE	0.000	12/20/2016	SGD	1,000,000.00	0.00	99.68450000	HSBC MARKETS Other
SGBY16100F=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	0.000	5/1/2017	SGD	1,000,000.00	0.00	99.32900000	HSBC MARKETS Other
SGNS13100T=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	0.500	4/1/2018	SGD	1,000,000.00	1,379.78	99.28000000	MALAYAN BANK Other
SGNC11100X=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	2.250	6/1/2021	SGD	1,000,000.00	2,459.02	104.28000000	MALAYAN BANK Other
SGNC16100F=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	2.125	6/1/2026	SGD	1,000,000.00	2,322.40	103.82000000	MALAYAN BANK Other
SGNZ10100F=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	2.875	9/1/2030	SGD	1,000,000.00	10,312.50	111.05000000	MALAYAN BANK Other
SGNZ13100V=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	3.375	9/1/2033	SGD	1,000,000.00	12,105.98	119.20000000	MALAYAN BANK Other
SGNA16100H=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	2.750	3/1/2046	SGD	1,000,000.00	9,864.13	112.95000000	DEUTSCHE Other
SGNY01100F=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	3.750	9/1/2016	SGD	1,000,000.00	13,451.09	100.45000000	DEUTSCHE Other
SGN710100Z=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	2.375	4/1/2017	SGD	1,000,000.00	6,553.96	101.20000000	DEUTSCHE Other
SGN215100F=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	1.375	10/1/2017	SGD	1,000,000.00	3,794.40	100.70000000	DEUTSCHE Other
SGNS13100T=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	0.500	4/1/2018	SGD	1,000,000.00	1,379.78	99.28000000	MALAYAN BANK Other
SGNY03100A=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	4.000	9/1/2018	SGD	1,000,000.00	14,347.83	106.50000000	DEUTSCHE Other
SGNC09100W=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	2.500	6/1/2019	SGD	1,000,000.00	2,732.24	104.08000000	MALAYAN BANK Other
SGNS14100H=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	1.625	10/1/2019	SGD	1,000,000.00	4,484.29	101.66000000	DEUTSCHE Other
SGNS15100S=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	2.000	7/1/2020	SGD	1,000,000.00	543.48	103.15000000	MALAYAN BANK Other
SGNY05100N=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	3.250	9/1/2020	SGD	1,000,000.00	11,657.61	108.16000000	MALAYAN BANK Other
SGNC11100X=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	2.250	6/1/2021	SGD	1,000,000.00	2,459.02	104.28000000	MALAYAN BANK Other
SGNY07100X=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	3.125	9/1/2022	SGD	1,000,000.00	11,209.24	109.85000000	MALAYAN BANK Other
SGNC13100H=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	2.750	7/1/2023	SGD	1,000,000.00	747.28	107.95000000	MALAYAN BANK Other
SGNY09100H=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	3.000	9/1/2024	SGD	1,000,000.00	10,760.87	110.56000000	DEUTSCHE Other
SGNC15100Z=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	2.375	6/1/2025	SGD	1,000,000.00	2,595.63	106.07000000	MALAYAN BANK Other
SGNC16100F=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	2.125	6/1/2026	SGD	1,000,000.00	2,322.40	103.82000000	MALAYAN BANK Other
SGNZ07100S=	FRB	SINGAP	SINGAPORE, REPUBLIC OF (GOVERNMENT)	3.500	3/1/2027	SGD	1,000,000.00	12,554.35	116.75000000	MALAYAN BANK Other

Users can also import and export their table from Excel as well as to specify the calculation parameters and whether they would like to manage all the bonds as fixed rate bonds.

In order to utilise this page, users can do the following,

1. In the Eikon Toolbar, search <BMON> in order to open the application
2. Select the bonds that you wish to search for in the left most column.

Using Bond Monitor, you can display the latest ratings from Fitch, S&P, Moody's, and up to three other agencies. Add ratings and related information your list by choosing a new field such as Rating #1 (see Choosing your data) then choosing an agency in the sidebar.

You can apply a rating template by choosing it from the Columns menu or by clicking one of the template names above your bond list. When you apply a rating template, the sidebar opens automatically to let you choose one or more agencies.

## 5. Government and Corporate Bond Search <GOVSRCH>

Thomson Reuters has a Bond Screener Application which can be used to screen Government and Corporate Bond issues.

In the Eikon Toolbar, search <GOVSRCH> or Government and Corporate Bonds in order to obtain the following screen,

Issuer Name	Country of Issue	Principal Currency	Yield to Maturity	Maturity	Coupon	Ticker
Lehman Brothers Holdings Inc	United States	US Dollar	95.1922830	11-Jul-2036	7.0000	LEH
Lehman Brothers Holdings Inc	United States	US Dollar	94.6440940	20-Jun-2036	6.9000	LEH
Navient Corp	United States	US Dollar	11.2590940	13-Jun-2036	6.7200	NAVI
Navient Corp	United States	US Dollar	11.2583010	13-Mar-2036	6.4650	NAVI
Navient Corp	United States	US Dollar	11.2572870	07-Jul-2036	6.8500	NAVI
Weatherford International Ltd	United States	US Dollar	10.0593020	01-Aug-2036	6.5000	WFTWE
Pakistan, Islamic Republic of (Government)	United States	US Dollar	8.8124020	31-Mar-2036	7.8750	PAKIST
Embarq Corp	United States	US Dollar	7.9948880	01-Jun-2036	7.9950	CTLEM
Sovereign Capital Trust VI	United States	US Dollar	7.9203850	13-Jun-2036	7.9080	SOVSCF
Macy's Retail Holdings Inc	United States	US Dollar	7.7988940	15-Aug-2036	7.8750	MMRHL
Diamond 1 Finance Corp	United States	US Dollar	7.7488870	15-Jul-2036	8.1000	DIAMNA
HCA Inc	United States	US Dollar	7.1127240	15-Jul-2036	7.7500	HCAHC
Telecom Italia Capital SA	United States	US Dollar	6.9890020	18-Jul-2036	7.2000	TLITA
Plains All American Pipeline LP	United States	US Dollar	6.7988890	15-May-2036	6.7000	PAA
Stora Enso Oyj	United States	US Dollar	6.7866140	15-Apr-2036	7.2500	STERV

Pressing the **Add / Remove Columns** button would allow users to specify the different type of criteria they would like to use when screening the bonds.

Next, using the **Filter** button, users can adjust the filters

Also, clicking on the titles of each column would sort the list according to the highest to lowest value, or the lowest to highest value, whichever is preferred.

Double-clicking on the names of the issuers in blue would reveal more information about the individual bonds, by linking the user to the description page of the bond.

## 6. Bond View

Bond View is able to aggregate versatile pricing and valuation data and tools in categories.

In the Eikon Toolbar, search for the bond required (E.g. SONYC 0.664)

- Overview: cross-content page with charts, news and events
- All Quotes: able to retrieve real-time market quotes for a bond
- News: related news and Top News Headlines
- Description: contains data on the principal and coupon of the issue,
- Valuations: users can see the calculated figures for yields, spreads, convexity and duration.
- History: contains the time-series valuation data on YTM, price, yield spread, YTW, modified duration and convexity
- Issuer: Provides details on the issuer's debt structure and its ratings and CDSs.
- Calculators: gives access to the set of analytical and valuation tools available for a particular instrument
- Related instruments: allows searching of similar instruments
- Holdings: details on holdings of institutional investors
- Research: allows searching for and accessing broker research reports
- 360 Menu: provides a comprehensive list of all available tools, news, market data and features

## 7. Money Market and Bond Yield Polls <MBYP>

The following chart could be obtained

1. In the Eikon Toolbar, type <MBYP> for Money Markets and Bond Yield Polls
2. Choose the country you wish to search at the poll type
3. If any specific contributor is favoured, a line representing their forecast could be added by clicking the box next to their name.



From this, the different expectations of rates and term structures could be observed for different countries, according to the probability of occurrence and the minimum and maximum values are also predicted.

## 8. International Financing Review

### <IFR>

The International Financing Review <IFR> enables users to access a 24-7 unique news, commentaries and analyses coverage of developments in:

- Credit
- Rates
- Foreign Exchange

In the Eikon Toolbar, search <IFR> in order to open the application. From here, users are able to set alerts for different events, by selecting “My Alerts” at the top of the page.

The screenshot displays the IFR Markets application interface. The top navigation bar includes 'My IFR | IFRMarkets', 'Bookmarks', 'Headline Viewer', and 'My Alerts'. Below this is a search bar and a 'SEARCH' button. The main content area is divided into two columns: 'GLOBAL SQUAWK BOX' on the left and 'GLOBAL ECONOMIC CALENDAR' on the right.

**GLOBAL SQUAWK BOX**

- JPN GOVTS: JGB futures hit new record high of 153.74  
Jul 8 9:05am
- JPN GOVTS: 10-yr yield hits fresh record low of -0.29%  
Jul 8 8:50am
- JPN GOVTS: BoJ buys JGBs in 1yr to 5yr zone and S/L zone  
Jul 8 8:44am
- JPN GOVTS: Life insurers big net foreign bond buyers in June - MoF  
Jul 8 8:21am
- JPN GOVTS: JGBs open firmer, with futures hitting new high  
Jul 8 8:14am
- JPN GOVTS: BoJ skips T+0 ops, current account at JPY304.79tn  
Jul 8 7:54am
- JPN GOVTS: Open – JGBs seen slightly firmer on BoJ buying  
Jul 8 6:58am
- CAN CLOSE: Mild O/P vs US., mostly steeper, supply the focus  
Jul 8 4:21am
- US GOVTS CLOSE: Yields rock then roll to end sharply unchanged in pre-payroll vigil  
Jul 8 4:01am
- BOC: Auction details – CAD3.2 bn GOC1.75% 09/01/2019 on Jul 14th  
Jul 8 3:03am

**MORNING MEETING**

- US GOVTS: Morning Meeting for Thursday July 7th  
Jul 7 6:18pm
- US GOVTS: Morning Meeting  
Jul 6 6:36pm

**GLOBAL ECONOMIC CALENDAR**

Date	GMT	Country	Release	Unit	Period	Actual
07 Jul	02:00	PH	Forex Reserves USD*	bln \$	Jun	83.97
07 Jul	04:00	TH	Consumer Confidence Idx*		Jun	71.60
07 Jul	04:30	NL	CPI YY NSA	%	Jun	0.00
07 Jul	05:00	JP	Leading Indicator*		May	0.00
07 Jul	05:00	JP	Coincident Indicator MM*		May	-1.50
07 Jul	05:00	EE	Consumer Price Index MM*	%	Jun	0.30
07 Jul	05:00	EE	Consumer Price Index YY*	%	Jun	-0.40
07 Jul	06:00	DE	Industrial Output MM	%	May	-1.30
07 Jul	06:45	FR	Exports, EUR Approx Time	bln EU	May	37.70
07 Jul	06:45	FR	Imports, EUR Approx Time	bln EU	May	40.50
07 Jul	06:45	FR	Current Account	bln EU	May	-0.30
07 Jul	06:45	FR	Trade Balance, EUR, SA	bln EU	May	-2.80
07 Jul	07:00	AT	Wholesale Prices NSA MM*	%	Jun	0.60
07 Jul	07:00	CZ	Frade Bal NRA	bln CZ	May	18.20
07 Jul	07:00	AT	Wholesale Prices NSA YY*	%	Jun	-3.40
07 Jul	07:00	DK	Industrial Production MM*	%	May	1.00
07 Jul	07:00	HU	Industrial Output YY	%	May	9.20
07 Jul	07:15	CH	CPI YY	%	Jun	-0.40
07 Jul	07:15	CH	CPI MM	%	Jun	0.10
07 Jul	08:00	NO	Manufacturing Output MM*	%	May	0.20
07 Jul	08:30	GB	Industrial Output YY	%	May	1.40
07 Jul	08:30	GB	Industrial Output MM	%	May	-0.50
07 Jul	08:30	GB	Manufacturing Output MM	%	May	-0.50
07 Jul	08:30	GB	Manufacturing Output YY	%	May	1.70

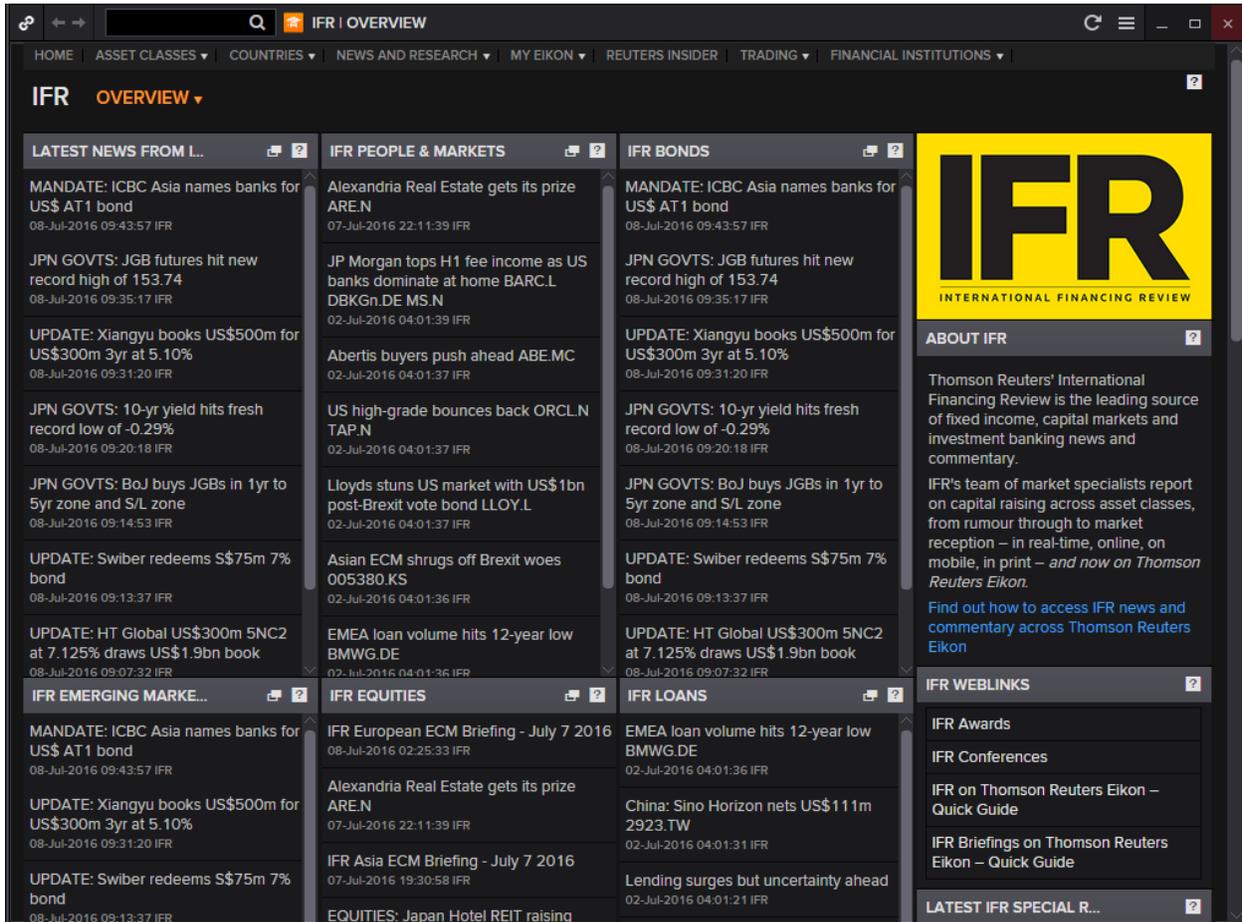
Using the IFR Markets page, users can view the different news headlines for global markets as well as the economic calendars for different countries and releases.

Note that for Alerts Morning Digests includes content submitted between 6pm to 6am. The Evening Digests include content submitted between 6am to 6pm. All times are dictated by time zone preferences as noted in Eikon.

<IFRI>

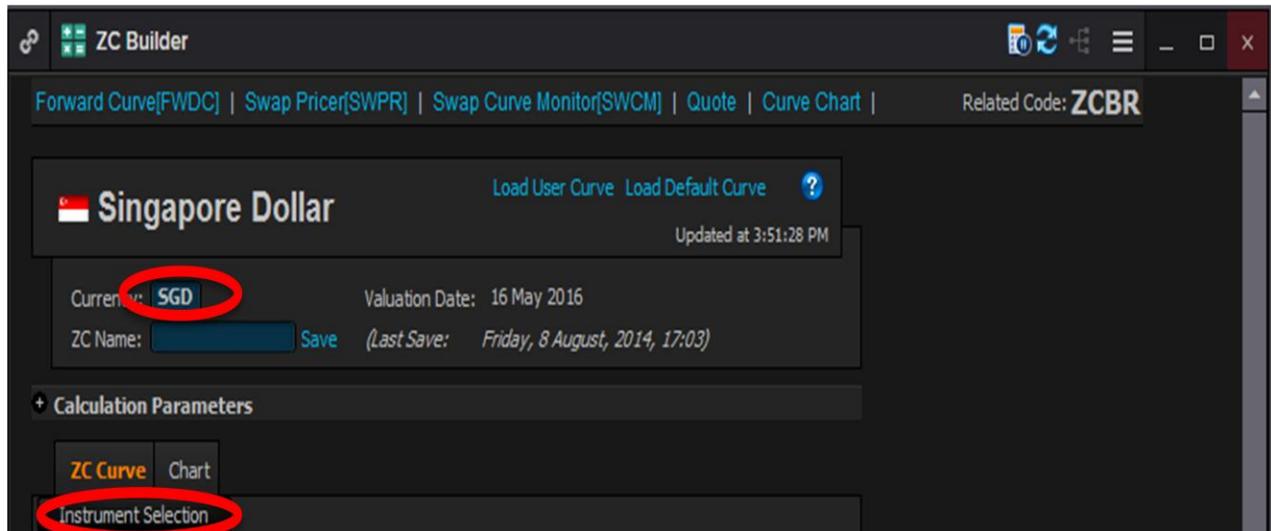
Another International Financing Review page that may be useful is the <IFRI> page which is essentially a News page which provides an overview with different headline news for different markets as well different asset classes.

In the Eikon Toolbar, search <IFRI> to open the application.

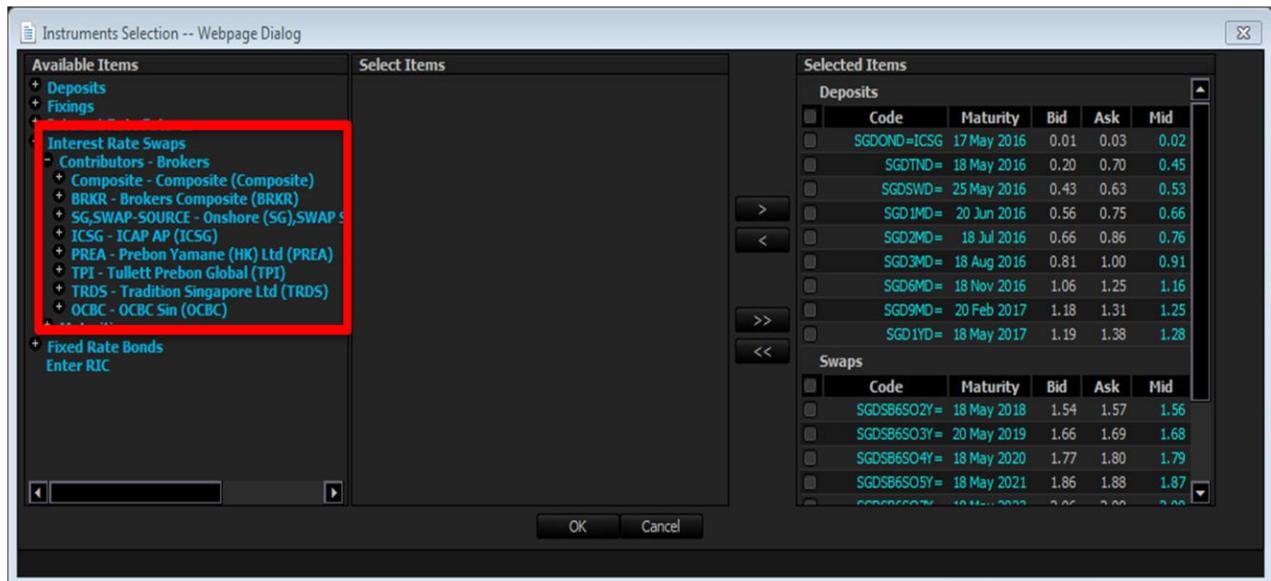


## 9. Zero Curve Builder <ZCBR>

1. In the Eikon Toolbar, type <ZCBR> (Zero Curve Builder)
2. Key in the currency needed, (i.e. <SGD> )
3. If you wish to choose the instruments used, click on “Instrument Selection”



4. Select the futures, bonds or swaps desired from the list by screening through the contributors list.



5. Save the curve and use it in different applications, e.g. Swap Pricer, Swaption, Credit Default Swap, Forward Curve etc.

## 10. Fixed Income Portfolio Analytics <FIPA>

An application which would prove useful for users wanting to analyse the specifics of their portfolio would be the Fixed Income Portfolio Analytics Application <FIPA>.

On this page, users can check of their reference data, monitor different bond portfolios as well as conduct different types of analyses such as Profit & Loss analysis, Cash Flow Analyses, Scenario Analyses etc.

We have presented two examples below of the profit & loss and the scenario analyses.

1. In the Eikon Toolbar, enter <FIPA>
2. Select a pre-determined portfolio or manually enter the data  
Reference Data > Portfolios > New > New Portfolio
3. From the left side bar, select the type of feature you would like to search.

E.g. Profit and Loss

On this page, select the portfolio from the drop down list and select the timeframe needed. Finally press enter for the page below to appear.

The screenshot displays the FIPA application interface. The main window is titled 'Fixed Income Portfolio Analytics' and shows a 'PROFIT & LOSS' analysis. The left sidebar contains various navigation options, with 'Profit & Loss' selected. The main area shows a table of portfolio data with columns for Gain from FairPrice Change, InterestGain, Occupied Capital, Cost of Carry, Accrued(%), PVBP(BP), Convexity, and Price. The data is summarized in a 'Grand Total' row.

	Gain from FairPrice Change	InterestGain	Occupied Capital	Cost of Carry	Accrued(%)	PVBP(BP)	Convexity	Price
- Dim Sum Bond	44,160.00	62,664.67	4,015,597.11	0.00	0.1050	4.5200	35.1088	99.10
- NULL	44,160.00	62,664.67	4,015,597.11	0.00	0.1050	4.5200	35.1088	99.10
- CNGV 2.560 06/29/17	9,710.00	13,606.58	1,001,971.23	0.00	0.0912	0.9395	1.3595	99.35
- CNGV 2.650 06/29/19	16,760.00	14,084.93	991,773.42	0.00	0.0944	2.7886	9.5185	98.71
- CNGV 3.100 06/29/22	8,810.00	16,476.72	1,004,524.38	0.00	0.1104	5.3102	33.2997	98.40
- CNGV 3.480 06/29/27	8,880.00	18,496.44	1,017,328.08	0.00	0.1239	9.0415	95.7331	99.90
<b>Grand Total</b>	<b>44,160.00</b>	<b>62,664.67</b>	<b>4,015,597.11</b>	<b>0.00</b>	<b>0.1050</b>	<b>4.5200</b>	<b>35.1088</b>	<b>99.10</b>

Secondly, you could conduct scenario analysis on this page.

After entering the FIPA application page, do the following.

1. In the left column, select “Scenario Analysis”
2. Select the portfolio necessary and select the different scenario/scenario sets (e.g. 10BP UP\_ UP 10B)
3. After choosing the different scenarios, select the weight you would like to issue to each scenario
4. Press “Calculate” and the calculator would select the total return for each scenario and show you a detailed breakdown below.
5. The Total Return, Horizon Yield, PVBP, DV01, Macaulay Duration and Modified Duration etc will be provided.

The screenshot shows the 'SCENARIO ANALYSIS' window in the FIPA application. At the top, there are input fields for 'Base' (7/1/2016), 'Horizon' (10/12/2016), and 'Report Currency'. Below this, there are dropdowns for 'Curve' (TR Market\_TR Market) and 'Price' (Default PriceSource\_Def). A 'Calculate' button is visible in the top right.

The 'Expected Return Analysis' section contains a table with the following data:

Scenario Name	Weight	Probability	Total Return	Horizon Yield(%)	Horizon PVBP	DV01	Horizon Macaulay	Horizon Mod
No Shift_No Shift	1	33%	38,133.43	3.5224	4.26	1,702.29	4.351	
10BP UP_UP10BP	2	67%	21,173.43	3.6220	4.22	1,689.43	4.339	

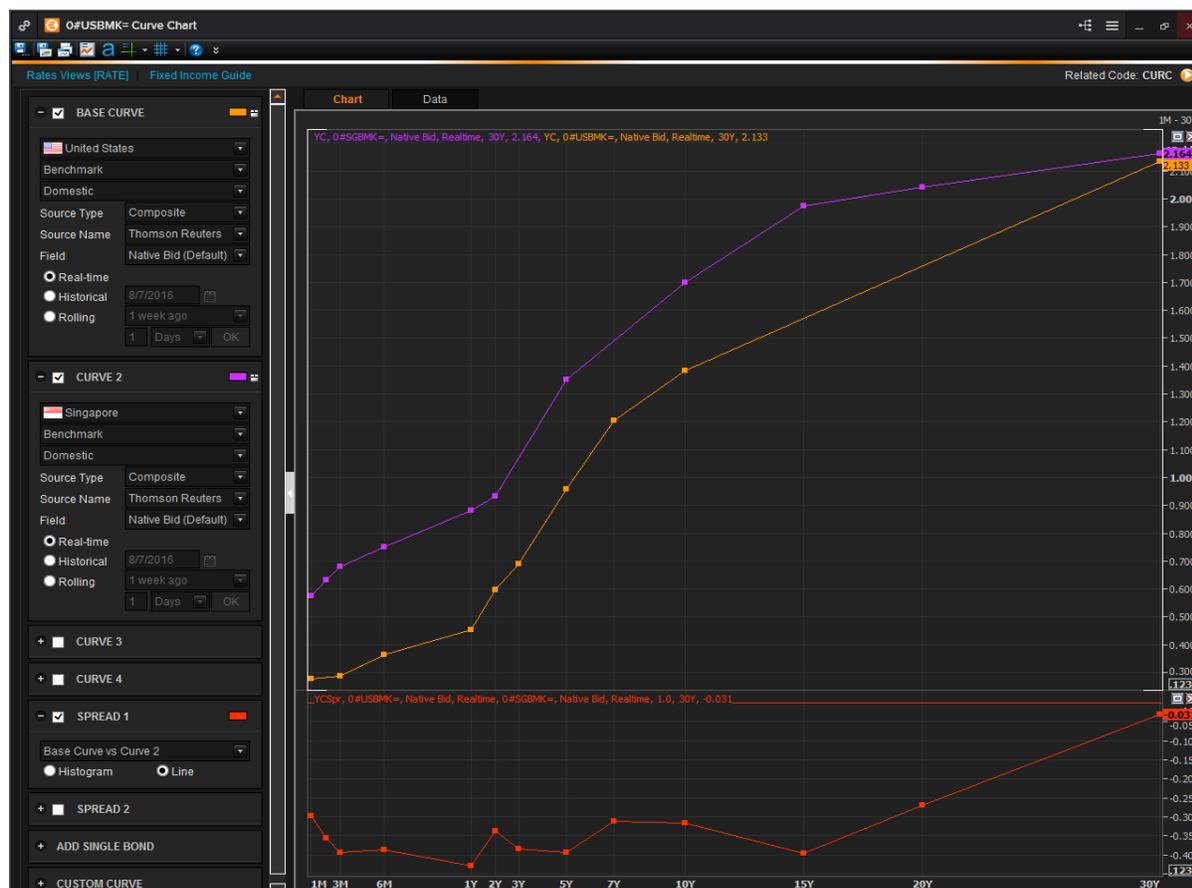
The 'Expected Return Details' section shows a table with columns: Currency, Position, Initial Position, Principal Amount, Initial Principal Amount, Clean MarketValue, and Initial Clean M. The data includes a 'Grand Total' row and several individual bond entries with their respective values.

## 11. Curve Chart <CURC>

Curve Chart brings together the common yield curve tasks, provides easy access to common curves and displays them from the available brokers and price contributors.

The application allows users to

1. View historical curves whenever possible
2. View and compare a large number of different yield curves from any country
3. Compare curves and their spread
4. Compare a single bond to the curves
5. Add and remove bonds



In the Eikon Toolbar, search <CURC> to open the application

1. Select the Country, Curve Type, Source Type, Source Name and Field
2. Add additional curves setting up the parameters the same way you set the parameters for the base Curve
3. Add spreads to compare the curves
4. Chart a single bond to compare it against the curves

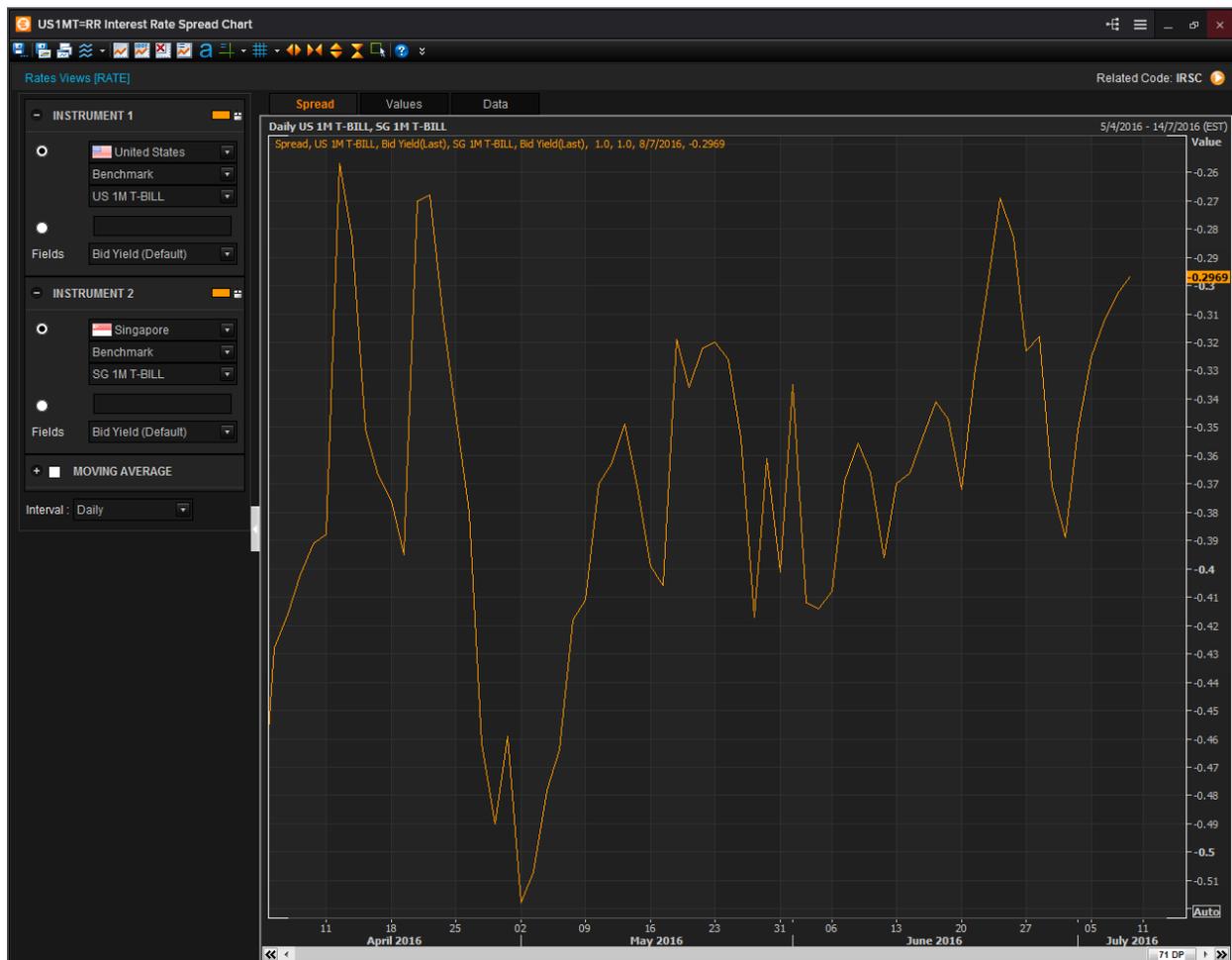
The typical shape of the yield curve is upward so the yields increase for the bonds of higher maturities. The longer the maturity the higher is the risk of investing in the bond, hence there are higher premiums associated with the bond.

## 12. Interest Rate Spread Chart <IRSC>

The Interest Rate Spread Chart <IRSC> shows the difference in yields between two instruments. The application allows users to

- Browse instruments by selecting a country and a type of instrument
- View the spread between yields of two instruments
- Views the yields of individual instruments
- View tabular data and copy it in MS Excel
- View Statistics, like a moving average.

Here, traders can observe the spread between yields of different instruments and look for high and low values, basing on the assumption that there are temporary and the spread will reverse to mean over time.



In the Eikon Toolbar, search <IRSC> to open the application:

1. Select or enter the RIC for Instrument 1 and 2
2. Select Statistics and define from how many periods it should be calculated
3. Select the interval you want to see
4. Spread between yields of two instruments on a time series would be displayed in the chart

Individual yields on a time-series can be viewed as well and tabular data, can be opened by selecting the second tab. Here, you can copy the data and send it to MS Excel if needed.

### 13. Yield Map <YMAP>

For users who wish to have a more visual representation of the page could utilise the Yield Map application <YMAP> in order to plot the different yields of bonds and swaps in order to view them visually on one page.

We will walk through the functionalities of the application.

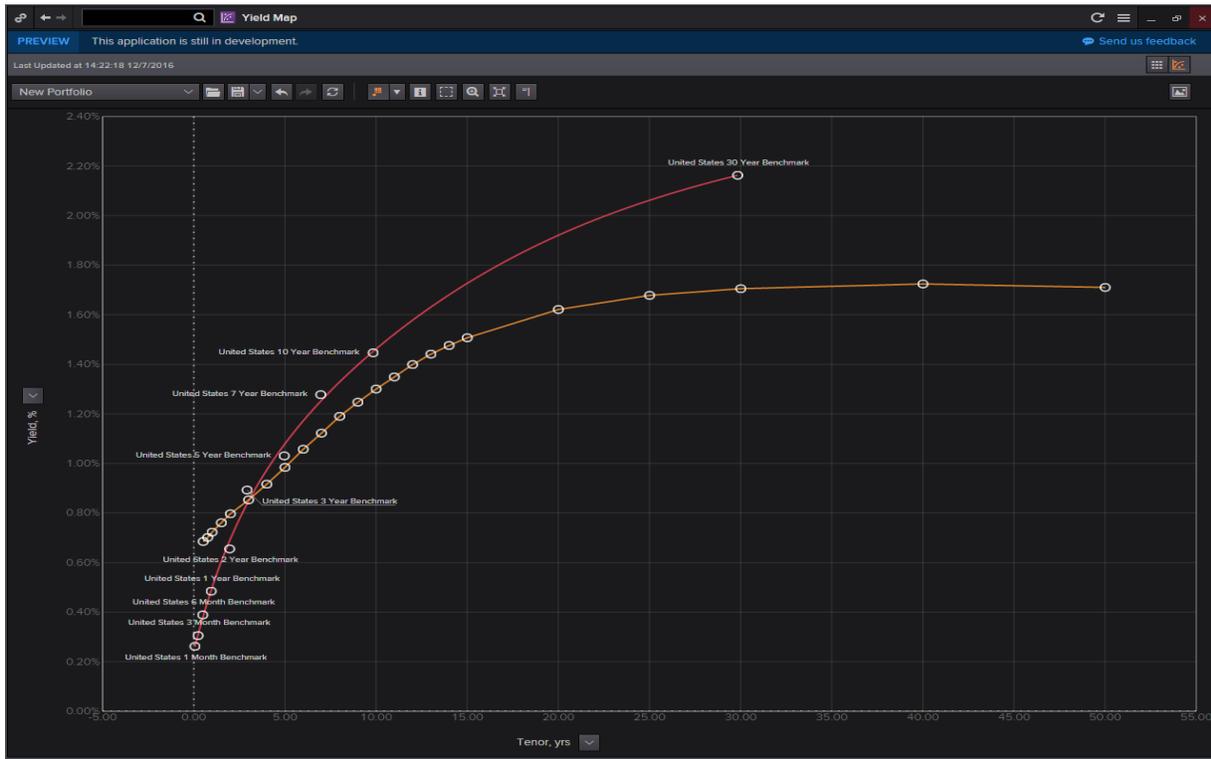
1. In the Eikon Toolbar, search <YMAP> in order to open the application.
2. Select Add New Portfolio > Create Empty Table if no Portfolio is available. Alternatively, you could import or drag and drop the lists if any.
3. If you selected Create Empty Table, you could search for Chain Code of the Bond or select individual instruments (e.g. 0#USBMK=)

The screenshot displays the Yield Map application interface. At the top, there is a search bar with 'Yield Map' entered. Below the search bar, a 'New Portfolio' dropdown menu is visible. The main area contains a table with columns for RIC, Name, Coupon, Maturity, Curr..., Price / Upfr..., Price Type, Yield, % / C..., Yield Type, Compounding Type, Duration, and Duration Ty... The table is divided into two sections: 'Bonds' and 'Swaps'. The 'Bonds' section lists various US Treasury instruments with their respective coupons, maturities, and yields. The 'Swaps' section lists USD IRS instruments with their respective maturities and yields. Each row in the table has a checkbox on the left and a 'Macaulay' button on the right.

RIC	Name	Coupon	Maturity	Curr...	Price / Upfr...	Price Type	Yield, % / C...	Yield Type	Compounding Type	Duration	Duration Ty...
0#USBMK=	US - BENC...										
US1MT=	US Treasury	0	4/8/2016	USD	99.98	Mid	0.26	Automa...	Native	0.06	Macaulay
US3MT=	US Treasury	0	6/10/2016	USD	99.93	Mid	0.31	Automa...	Native	0.23	Macaulay
US6MT=	US Treasury	0	5/1/2017	USD	99.81	Mid	0.39	Automa...	Native	0.48	Macaulay
US1YT=	US Treasury	0	22/6/2017	USD	99.54	Mid	0.48	Automa...	Native	0.94	Macaulay
US2YT=	US Treasury	0.625	30/6/2018	USD	99.94	Mid	0.66	Automa...	Native	1.96	Macaulay
US3YT=	US Treasury	0.875	15/6/2019	USD	99.95	Mid	0.89	Automa...	Native	2.89	Macaulay
US5YT=	US Treasury	1.125	30/6/2021	USD	100.46	Mid	1.03	Automa...	Native	4.84	Macaulay
US7YT=	US Treasury	1.375	30/6/2023	USD	100.65	Mid	1.28	Automa...	Native	6.66	Macaulay
US10YT=	US Treasury	1.625	15/5/2026	USD	101.63	Mid	1.45	Automa...	Native	9.12	Macaulay
US30YT=	US Treasury	2.5	15/5/2046	USD	107.39	Mid	2.16	Automa...	Native	21.47	Macaulay
USDIRS	USD IRS FO...										
USDAM...	USD 6M AM...		17/1/2017	USD	-0.00	Bid	0.69			0.49	Macaulay
USDAM...	USD 9M AM...		18/4/2017	USD	-0.00	Bid	0.70			0.74	Macaulay
USDAM...	USD 1Y AM...		14/7/2017	USD	0.00	Bid	0.72			0.98	Macaulay
USDAM...	USD 18M A...		16/1/2018	USD	0.00	Bid	0.76			1.49	Macaulay
USDAM...	USD 2Y AM...		16/7/2018	USD	0.00	Bid	0.80			1.98	Macaulay
USDAM...	USD 3Y AM...		15/7/2019	USD	0.00	Bid	0.85			2.96	Macaulay
USDAM...	USD 4Y AM...		14/7/2020	USD	0.00	Bid	0.92			3.93	Macaulay
USDAM...	USD 5Y AM...		14/7/2021	USD	0.00	Bid	0.98			4.89	Macaulay
USDAM...	USD 6Y AM...		14/7/2022	USD	0.00	Bid	1.06			5.83	Macaulay
USDAM...	USD 7Y AM...		14/7/2023	USD	0.00	Bid	1.12			6.75	Macaulay
USDAM...	USD 8Y AM...		15/7/2024	USD	0.00	Bid	1.19			7.66	Macaulay

4. Right-click on any of the data items and select "Add to Curve" and choose a curve and colour.

- Select the  button for the curve to appear as follows. This chart would show you the two yields stacked side by side by the absolute figures for the yield.

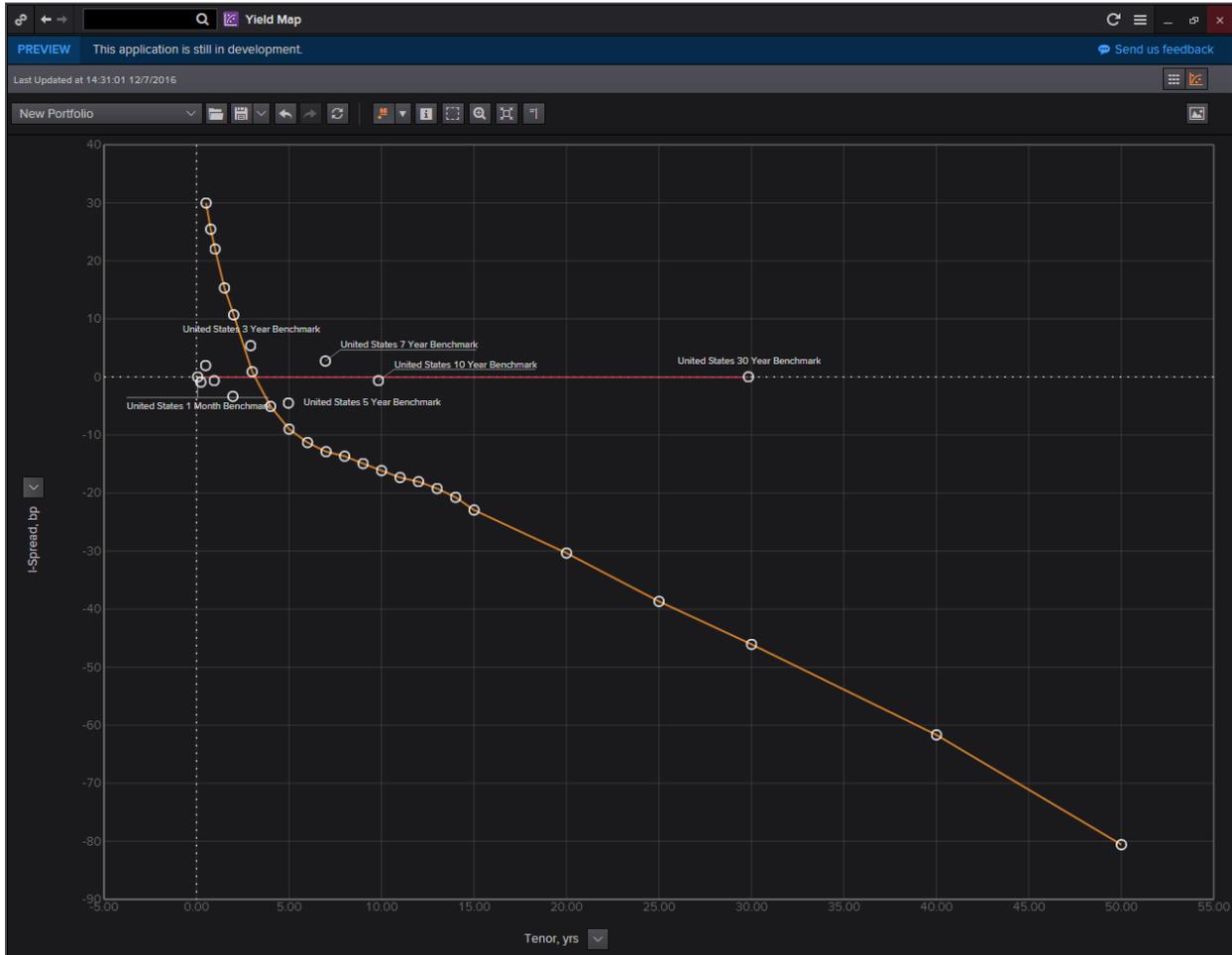


- Right click on the curve and select **Bootstrap** in order to plot a zero curve out of the swap or bond



7. Alternatively, you could force a yield curve to zero in order to view how the other instrument performed relative to it.

Here, click on the arrow on the vertical axis and select I-spread. Following this, select the yield curve you would like to force to zero (e.g. the bond yield curve). The resultant chart as shown below would show how the second curve performed relative to the first with positive figures showing that the yield for the second curve was higher than the first and vice versa.



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## Part 6: Commodities and Energy



# COMMONLY USED CODES: COMMODITIES AND CURRENCIES

GLOBAL	
Euro Bond	FGBLc1
JGB	FYBc1
Long Gilt	FLGc1
3-Month EURIBOR	FEIc1

FINANCIALS – CURRENCIES	
Euro	UROc1
Japanese Yen	JYc1
Canadian Dollar	CDc1
Swiss Franc	SFc1

FINANCIALS – INTEREST RATES	
Eurodollar	ECc1
US Long Bond	USc1
US Long Bond – Electronic Trading	ZBc1
2-Year T-Note – Electronic Trading	ZTc1
5-Year T-Note – Electronic Trading	ZFc1
10-Year T-Note – Electronic Trading	ZNc1
Federal Funds	FFc1

COMPOSITE TREASURY BONDS		
On the Run	Eikon	Eikon NAS
1 Month T-Bill	US1MT=RR	US1MT=RRPS
3 Month T-Bill	US3MT=RR	US3MT=RRPS
6 Month T-Bill	US6MT=RR	US6MT=RRPS
1 Year Note	US1YT=RR	US1YT=RRPS
2 Year Note	US2YT=RR	US2YT=RRPS
3 Year Note	US3YT=RR	US3YT=RRPS
5 Year Note	US5YT=RR	US5YT=RRPS
10 Year Note	US10YT=RR	US10YT=RRPS
30 Year Note	US30YT=RR	US30YT=RRPS

VEHICLE RETRIEVAL – RULES OF THUMB	
Vehicle	Format
Class Stock	Lower case (ab)
Preferred Stock	_p
Rights	_r
warrants	_t
When Issued	_w
Units	_u
Exchange Specific	.X (exch code)

CROSS CURRENCY	
Australia Dollar – US Dollar	AUD=
Canadian Dollar – US Dollar	CAD=
Euro – Japanese Yen	EURJPY=
Euro – US Dollar	EUR=
US Dollar – Swiss Franc	CHF=
US Dollar – GB Pound Sterling	GBP=
GB Pound – Euro	GBPEURO=

ENERGY	
Crude Oil, Light	CLc1
Gasoline	RBc1
Heating Oil	HOc1
Natural Gas	NGc1

METALS	
Gold	GCc1
Platinum	PLc1
Silver	SLc1
Copper	HGc1

COMMODITIES – FOOD, MEATS & MISCELLANEOUS	
Coffee C	KCc1
Cocoa	CCc1
Sugar (World)	SBc1
Orange Juice	OJc1
Cotton	CTc1
Lumber	LBc1
Live Cattle	LCc1
Live Hogs	LHc1

COMMODITIES – GRAINS & OILSEEDS	
Corn	Cc1
Wheat	Wc1
Soybean	Sc1
Soybean Oil	BOc1
Soybean Meal	SMc1

## 1. Overview

Commodities are often categorized as raw or partly-refined materials, traded for processing into final goods. A very small percentage of commodities trading require physical delivery as most organizations use the exchange for hedging purposes.

There are 4 main commodities markets, namely:

1. Energy
2. Metals
3. Agriculture
4. Shipping

Commodities are either traded on an exchange or OTC, as cash or forwards and futures.

### How to View Futures on Eikon

Eikon allows users to view future chain contracts as well as individual futures contracts.

1. In order to view a **future chain contract**, one can do either of the following.

A: In the Eikon Search Bar, type **<0#XXX:>** (XXX represents the code for the chain contracts)

B: In the Quote App (F4), type **<0#XXX:>** or type **XXX:** and press F3.

A would give you the detailed view and specifications of the contract chain, while B would provide you the prices of the chain contracts.

2. In order to view **individual contracts**, one can do A or B, replacing the search with **<XXXC1>** for the nearest live contract.

A good thing to note about futures on Eikon:

Types of Instrument	Example Code	RIC Logic
<b>Futures Chains</b>	0#XXX: E.g. 0#LCO:	The chain RIC shows all the live futures contracts. (0#): Indicates that it is a chain (LCO): Root Code (:): Indicates a futures chain
<b>Individual Futures Contract</b>	E.g. LCOZ5	The individual contract consists of the root code, the month and year of expiry. (LCO): Root Code (Z): December (5): Year 2015
<b>Continuation RIC</b>	E.g. LCOC1	This will show the contract closes to expiry. Once this contract expires, it will automatically roll over to display the next live contract
<b>Expired Futures</b>	LCOZ1^3	(LCO): Root Code (Z): December (3): Year in the decade, 2013 (^): indicates an expired future (1): Decade. For example, here it is 10.

## Spread Trading

Commodities, especially energy products, may sometimes be trade on spreads. Common spread contracts show the following,

- The difference between 2 related products
- The difference between two different delivery months of the same futures chain.

Type of Instrument	Example Code	RIC Logic
Spread Chain	0#LCO-:	(-): Indicates calendar spread contracts. Hence, the spread between different delivery months
Individual Spread Contracts	LCOV5-V6	The spread between the September 2015 and the December 2016 contracts
Crack Spread	0#1HO-CL	The difference between two different types of energy products. In this case, the crack spread between heating oil and crude oil trading on NYMEX

Crack spreads can be defined as the differential between the price of crude oil and petroleum products. Hence it involves buying crude oil, and simultaneously selling products, or vice versa. This could allow refineries to lock-in a crude oil price and heating oil and unleaded gasoline prices simultaneously in order to establish a fixed refining margin. Thus, it is a hedging tool.

## Options on Futures

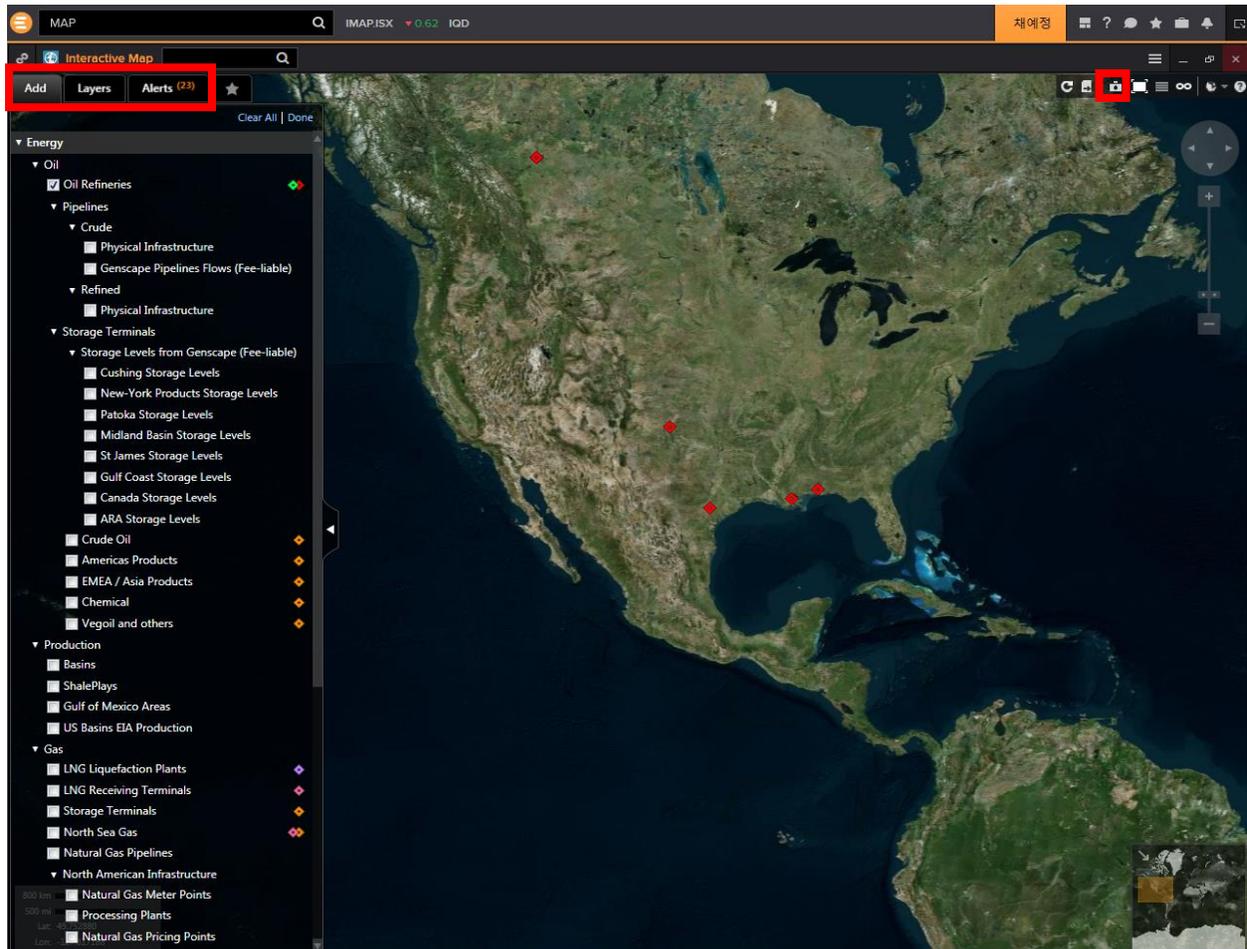
Type of Instrument	Example Code	RIC Logic
Options Chains	0#LCO+: 0#LCO++	(+): Options on futures chains all end with + ++: At the money options

## OTC Instruments

Type of Instrument	Example Code	RIC Logic
OTC Commodities	0#FO-E	This is used to separate information regarding type, term, delivery method and quality. The example shows all fuel oil in Europe FO: Fuel Oil E: Europe
OTC Commodities	FO35-C-NWE	FO35: Fuel Oil with API 3.5% C: Cif (Cost Insurance and Freight). The price includes delivery as compared to FOB (Free on Board) NWE: Location North Western Europe

## 2. Interactive Map <MAP>

The Interactive Map function on Eikon is a good visual display of all the key factors that affect the supply chain and prices of commodities trading. On the Interactive Map Application, one can view the refineries or different production facilities, and filter out those which are closed or under construction. As shown in the screen shot below, these are the oil refineries currently which are under maintenance.



1. In the Eikon Toolbar, search **MAP** to open the Interactive Map Application.
2. In the **Add** tab, choose the data sets you which to search on
3. Filter each data set in the **Layer** tab.
4. Set alerts for any notifications that you wish to be notified about.
5. Take a screenshot and save an image of the current view with the button in the upper right corner.

For information about Vessels, there are often two fields of concern

1. AIS Draft (m): This shows the current depth of the vessel
2. Max Draft (M): Maximum depth the vessel can travel at

These two figures would reflect the weight of cargo on board. (<70%: usually empty and >97%: full)

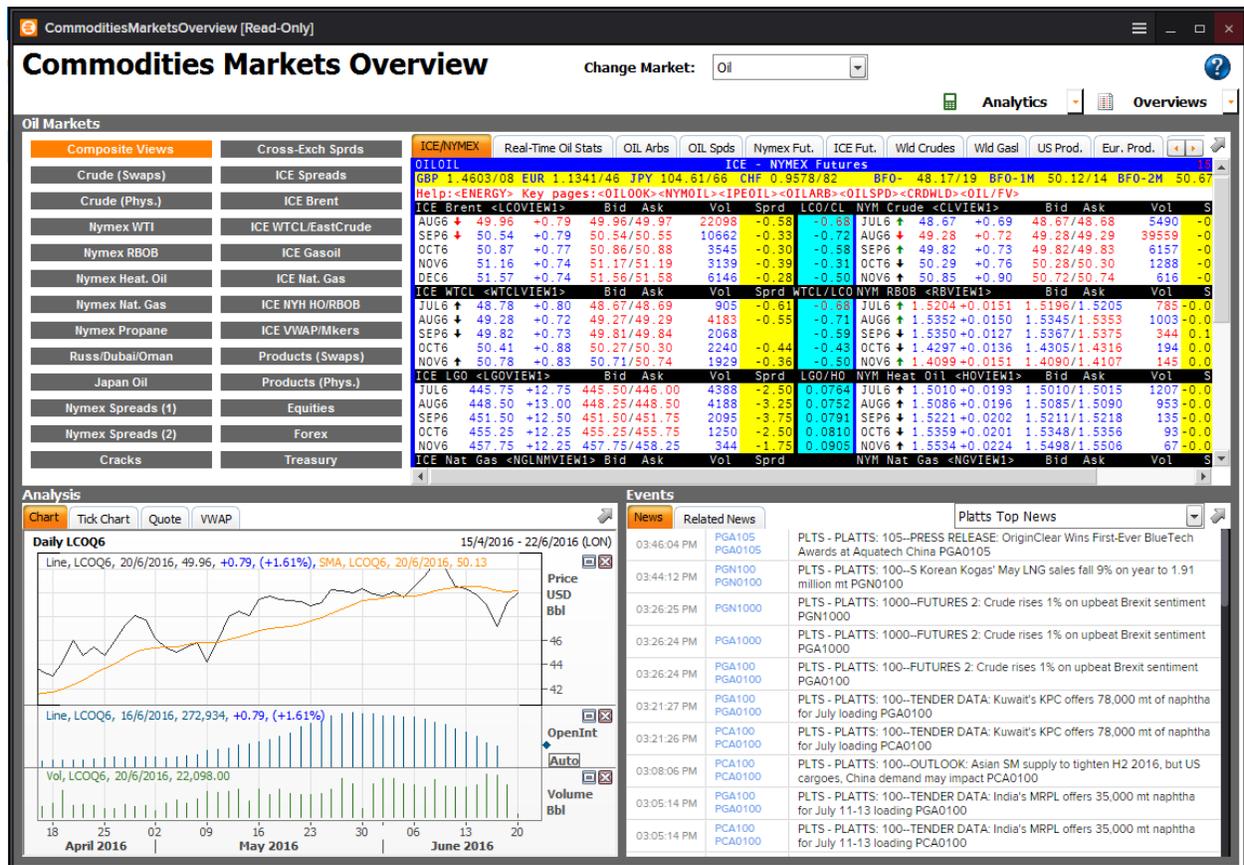
### 3. Commodities Market Overview Application <COMO>

Another useful app for Commodities traders would be the COMO application.

On this application, users can get a quick overview about all essential information about a certain commodity.

There are three main markets covered, agriculture, oil and metals.

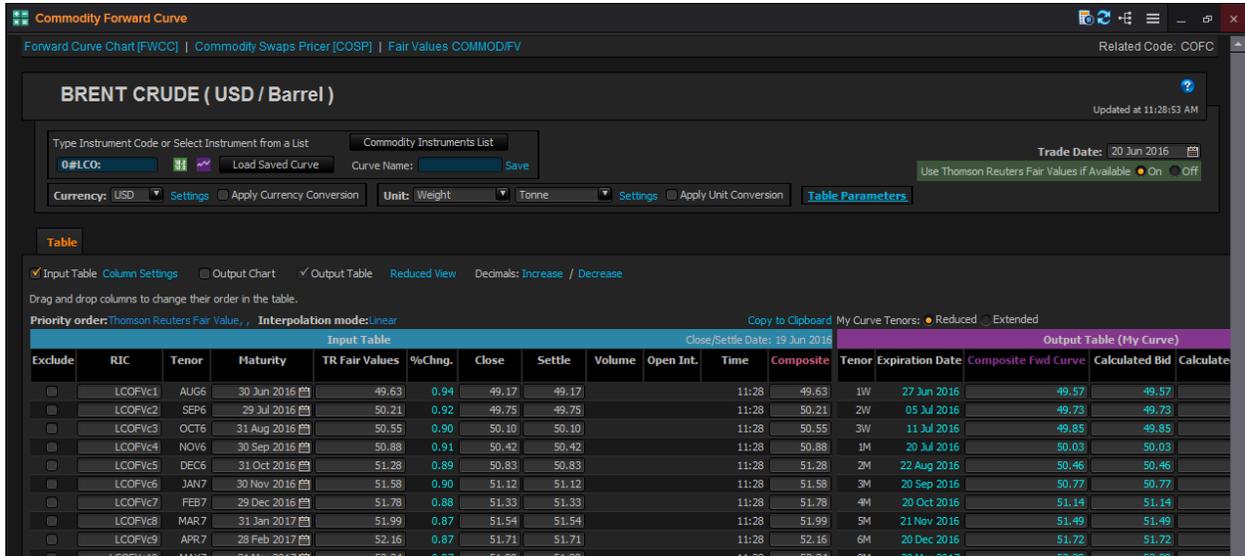
Through the various tabs, users can obtain a composite view of the market, as well as look into different Quote pages for spreads, swaps and basic treasury information.



## 4. Charting for Commodities

### Commodity Forward Curve Application <COFC>

Using Eikon, one can plot the forward curve of different chain contracts using the <COFC> application.

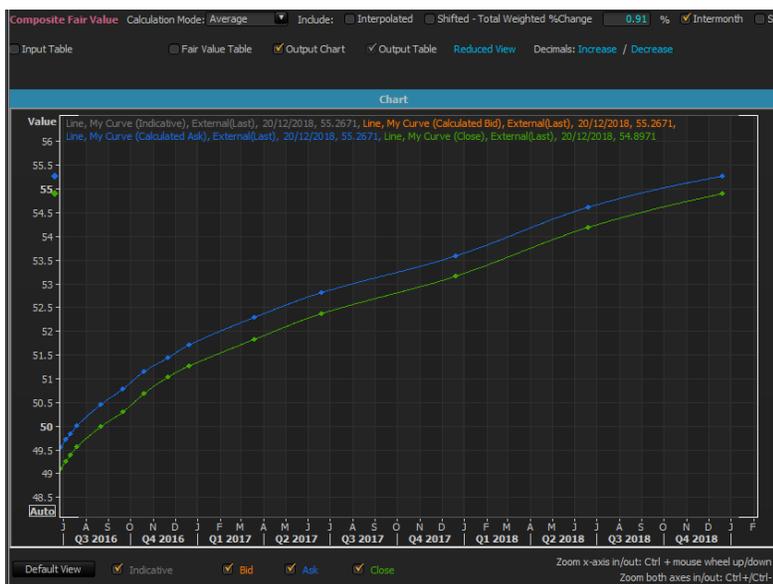


In order to generate the following chart, one should type <COFC> in the Eikon Toolbar.

In the app, the following could be customized.

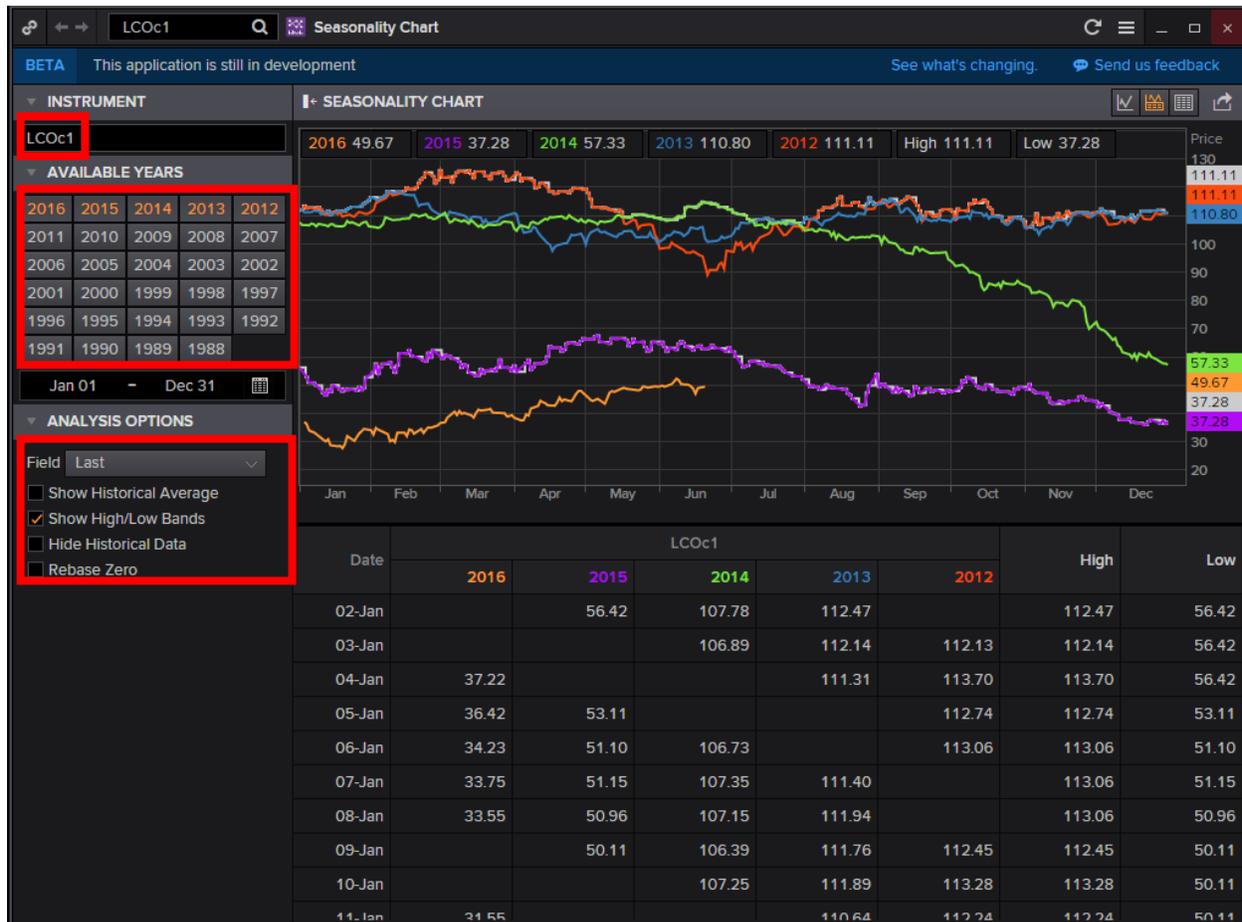
1. Instrument Chain Code
2. Currency
3. Units
4. Whether to use Thomson Reuters Fair Values

Check the “Output Chart” box and the following forward curve will be generated.



## Seasonal Analysis Chart <SEAC>

Using the seasonal analysis chart <SEAC> application, one can plot the different prices of the contract on each day across different years. (E.g. the price of the contract every year on 14 January). This allows analysts and traders to observe the trend of prices within the year as well as comparing it to past trends.



1. In the Eikon Toolbar, search <SEAC> to open the application
2. Select the contract (continuation code) you would like to view, e.g. LCOc1
3. Select the number of years to include
4. If you require the historical average, high low bands etc, select the options in “Analysis Options”

This shows for example 5 successive years of the front month contract for Brent Crude Oil. Here, you can analyze the performance and trend for prices each year.

## Term Structure

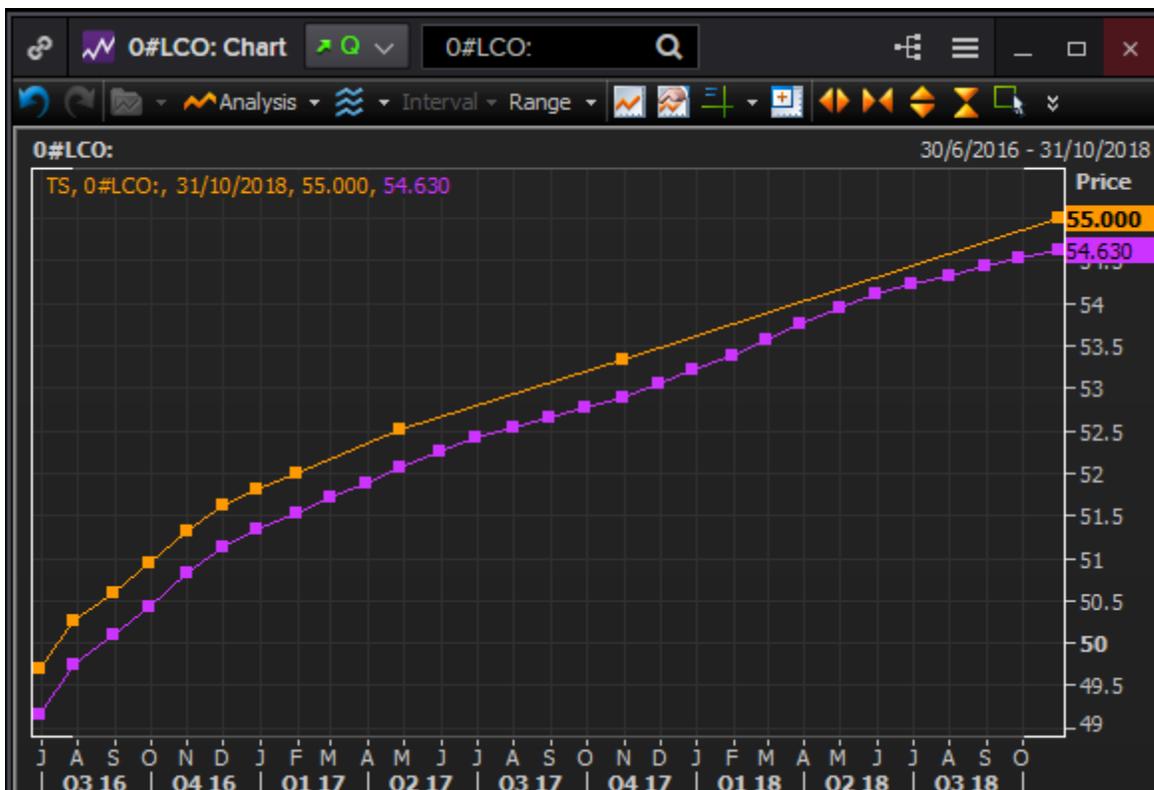
Using the term structure of a contract would allow you to see whether the market is in Backwardation or Contango. The terms are defined below.

**Contango:** Market situation where the nearby price is lower than a further forward price. (Denoted by “c-“ in the quote)

**Backwardation:** Market situation where a nearby price is higher than a further forward price. (Denoted by “b+” in the quote)

Term structure is usually used to monitor commodity markets where holding costs such as insurance and storage costs may cause distant futures prices to be at a premium to nearby futures prices.

1. Press F10 to open the chart app.
2. Type: 0#LCO: or 0#XXX: to pull up the default chart which is the term structure.



Hence, here we observe that the prices are in Contango, where the nearby contracts have lower prices than further futures. Hence the cash price is at a discount to the futures prices, or the nearby futures are at a discount to the distant futures. The last price and the previous close lines are sloping up.

One may observe that the term structure is similar to a yield curve but whilst the yield curve shows the yields of a single instrument over time, the term structure shows the different prices of chain contracts over time.

## Commodity Spread Chart <SPDC>

The Commodity Spread Chart <SPDC> could be utilized to show a simple spread between any two, three or four commodity instruments and calculates the difference in the yield of those instruments. Traders can utilize the futures spread in an arbitrage technique where they buy one commodity and sell another contract of the same commodity to capitalize on price differences.

On this note, let us first define the 3 most common types of spreads in commodities.

1. Crack spread: As defined previously, the crack spread is the price differential between crude oil and one of its by-products, primarily gasoline, gas oil and heating oil.
2. Crush spread: Differential between soybean futures and soybean meal and oil futures - represents the premium inherent for processing soybeans
3. Spark spread: differential between natural gas and a unit of electricity, for gas-fired power stations.

Other spreads available in the SPDC app include

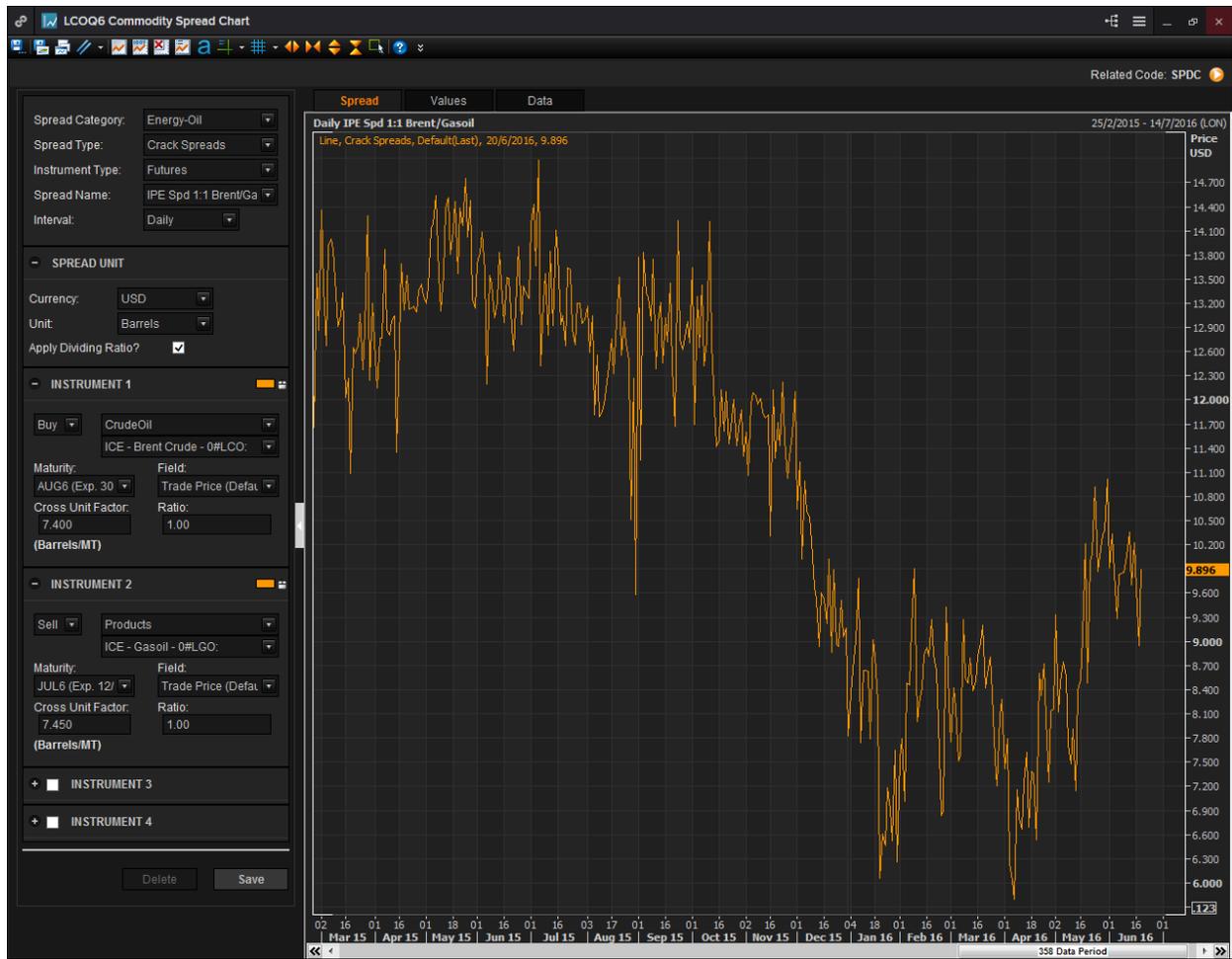
4. Crude spreads; the differential between different crude oils (WTI v Brent etc)
5. Different Agriculture Softs spreads (Coffee, Cocoa and Sugar).

Alternatively, the user can define any spread he wishes with the SPDC app.

In order to utilize the application in Eikon, the following steps could be performed.

1. In the Eikon toolbar, search <SPDC>
2. Under Spread Category, choose the type of commodity required (E.g. Energy, Agriculture etc).
3. Under Spread Type, choose one of the 5 types as explained above or a user-defined spread
4. Choose the instrument type (Futures or Calendar Strips)
5. Select the interval of time and the currency and unit
6. Set the two contracts, whether to buy or sell crude and to buy or sell gasoline, gas oil and heating oil.

Refer to the next page for the screenshot of the application



One may realize that the interface of the SPDC application largely resembles that of the F10 Chart interface.

On this application, you are also able do different types of technical analysis, such as plotting trend lines, or Fibonacci retracements and projections.

# Part 6A: Energy Market

# Eikon shortcuts: Energy

REAL TIME MONITORING	
ALT	Alert Manager
COPM	Commodities Prices Monitor
MON	Monitor
OPW	Option Watch
Q	Quote
QL	Quote List
QLI	Quote Line
TICK	Ticker
NEWS	
NEWS	News Monitor
TOPNEWS	Top News
CHARTING	
CHT	Chart App
SPDC	Commodity Spread Chart
FWDC	Forward Curve
VOLC	Volatility Chart
TEAC	Technical Analysis Chart
REBC	Rebasing Chart

ANALYTICS & CALCS	
AVRG	Average Calculator
CALC	Eikon Calculators
CFTC	Commodity Futures Trading Commission
COCM	Commodity Curve Monitor
COFC	Commodity Forward Curve
COOA	Commodity Options Analyzer
COSP	Commodity Swaps Pricer
CSPD	Cross-Commodity Spreads
ESPD	Energy Spreads
HURRICANE	Hurricane Tracker
MAP	Interactive Map
MAPTRK	Interactive Map Asset Tracker
OSPD	Oil Spreads
OSWO	Oil Swaps Overview
TANK	US Weekly Oil Stocks Estimates (API, EIA)
UKGSS	UK Gas Supply and Status
UKPSS	UK Power Supply and Status
VOLS	Volatility Surface Calculator

MARKETS – OIL	
BRENT	Brent Crudes Guide
CRUDE	Crude Guide
CRUDEDUB	Dubai Crudes Guide
CRUDEUS	US Light Sweet Crudes Guide
DIESEL	Diesel Guide
EWFO	Platts eWindow Market Data – Asia Financial – Fuel Oil – Daily Report
EWFP	Platts eWindow Market Data – Asia Physical Products – Fuel Oil – Daily Report
EWIN	Platts eWindow Market Data
FUELOIL	Fuel Oil Guide
GASHEAT	Gas Oil / Heating Oil Guide
GASOLINE	Gasoline Guide
JETFUEL	Jet Fuel Guide
LIQPETRO	Liquified Petroleum Gas Guide
NAPHTHA	Naphtha Guide
OILOUT	Fundamentals Database and Refinery Outages
OSWO	Swaps Overview
PETRO	Petrochemicals Guide
REFINED	Refined Products Guide

## Chapter 6A: Energy

MARKETS – POWER	
IIRPWR	IIR Power Outages
POINTCARBON	PointCarbon
POWAUS	Power – Australia
POWBEL	Power – Belgium
POWBRA	Power – Brazil
POWCAISO	Power – CAISO (California ISO)
POWCAN	Power – Canada
POWCEEUR	Power – Central and Eastern Europe
POWCHE	Power – Switzerland
POWCZE	Power – Czech Republic
POWEBL	Energy Bank Link (EBL)
POWERCOT	Power – ERCOT
POWESP	Power – Spain
POWEUR	Power – Continental Europe
POWFRA	Power – France
POWGER	Power – Germany
POWITA	Power – Italy
POWNLD	Power – Netherlands
POWNOR	Power – Norway
POWNORDIC	Power – Nordic
POWPNW	Power – PNW (Northwest)
POWRENEW	Power – Renewables
POWSWE	Power – Sweden
POWTUR	Power – Turkey
POWUK	Power – United Kingdom
POWUSA	Power – United States

MARKETS – GAS	
GASEUR	Gas – Continental Europe
GASUK	Gas – United Kingdom
GASUS	Gas – USA

MARKETS – COAL	
COALAU	Coal – Australia Guide
COALCHN	Coal – China
COALEUR	Coal – Europe Guide
COALZAF	Coal – South Africa Guide
COALUS	Coal – United States Guide

MARKETS – CARBON	
CARBAMER	Carbon – Americas Guide
CARBAPAC	Carbon – Asia-Pacific Guide
CDMJI	Carbon – CDM/JI Guide
CARBCM	Carbon – Crediting Mechanisms Guide
CARBEUR	Carbon – Europe Guide
CARBGCP	Carbon – Global Climate Policy Guide
CARBNEWC	Carbon – New Credits Guide
CARBNAOFF	Carbon – North America Offsets Guide

SEARCH TOOLS	
ANSWERS	Eikon Answers
ENESRCH	Energy – Advanced Search
OILREF	Oil Refineries Advanced Search
PHYSICALSRCH	Commodities Physical Assets – Advanced Search
WEATHERSRC	Weather – Advanced Search

## 1. Energy Homepage

### Overview

The screenshot displays the Thomson Reuters Energy homepage. The interface is divided into several sections:

- Global Market Overview:** A sidebar on the left lists market categories such as CRUDE, REFINED PRODUCTS, and Middle Distillates.
- ENERGY TOP NEWS:** A central section featuring headlines like "SAUDI ARABIA'S CRUDE OIL EXPORTS FALL IN APRIL DESPITE HIGH OUTPUT" and "Marathon Oil deal latest big Oklahoma bet by U.S. drillers".
- OIL IN CONTEXT:** A table listing key oil prices and spreads, including ICE Brent Crude, NYMEX Light Sweet, and DME Oman Crude.
- ASSET PERFORMANCE:** A line chart showing performance for various assets like LCOc1, DJI, and EUR from 2014 to 2016.
- WORLD OIL MARKET OVERVIEW:** A section providing a broader market perspective with headlines like "Oil prices fall for first time in three days".
- OIL WATCH:** A table tracking specific market indicators such as ICE WTI/Brent spread and NYM HO No 2.
- THOMSON REUTERS OIL RESEARCH & FORECASTS:** A prominent banner on the right side offering research and forecast services.

The energy homepage contains a quick overview of all necessary information that a typical user would require. By default, the page is set to open at Crude Oil, Global Market page.

Key information on this page include top news of the Energy market, as well as key oil prices and spreads as well as latest news about crude and the world oil market.

From this page, users can navigate to other pages within Eikon such as different types of energy products as well as to view information about the pricing, supply and demand of oil as well as production, storage and flows.

We will now look at the flows portion in detail.

## Oilflow

To arrive at this page, go to Home > Asset Classes > Commodities > Energy > Oil > Flows

The screenshot displays the 'World Flows Explorer' interface. The left sidebar lists various energy categories: CRUDE OIL, DISTILLATES, GASOLINE, FUEL OIL, NAPHTHA, and METHODOLOGY. The main panel is titled 'WORLD FLOWS EXPLORER' and includes several filter sections: Product (Unknown Oil, Crude Oil, Fuel Oil), Grade, Volume (From/To), Load (Supply) with Country/Region, Port, and Date filters, Discharge (Demand) with similar filters, Vessel (Class, Name, Status, IMO), and Parties (Issuer, Charterer, Awardee). Below these filters is a bar chart showing oil flows in kilotonnes (kt) from October 2015 to August 2016. The chart shows a steady flow of approximately 200 kt per month, with a slight dip in July 2016. Below the chart, a search bar indicates 'Search returned more than 20,000 entries. Please refine your search.' A table below the search bar shows a list of vessels with columns for Load Port, Load Location, Discharge Port, Discharge Location, Volume (kilotonnes (kt)), Product, Grade, Departure Date, Arrival Date, Vessel, and Vessel IMO. The table is filtered to show 'Discharging in August 2016, Total: 2,300 kilotonnes (kt), count: 9'.

Load Port	Load Location	Discharge Port	Discharge Location	Volume (kilotonnes (kt))	Product	Grade	Departure Date	Arrival Date	Vessel	Vessel IMO
Discharging in August 2016, Total: 2,300 kilotonnes (kt), count: 9										
<input type="checkbox"/>	Caribbean (Other)	Singapore	Singapore	270	Fuel Oil	Fuel Oil	30/6/2016	18/8/2016	POWER D	92411
<input type="checkbox"/>	Caribbean (Other)	Singapore	Singapore	270	Fuel Oil	Fuel Oil	30/6/2016	18/8/2016	XIN LIAN YANG	96140
<input type="checkbox"/>	Caribbean (Other)	Singapore	Singapore	270	Fuel Oil	Fuel Oil	29/6/2016	13/8/2016	OLYMPIC LUCK	94242
<input type="checkbox"/>	Caribbean (Other)	Singapore	Singapore	270	Fuel Oil	Fuel Oil	25/6/2016	9/8/2016	GENER88 HERA	97231
<input type="checkbox"/>	Hound Point	United Kingdom	China	280	Crude Oil	Forties	19/6/2016	5/8/2016	SARA	95377
<input type="checkbox"/>	Caribbean (Other)	Singapore	Singapore	270	Fuel Oil	Fuel Oil	21/6/2016	5/8/2016	MT SOLANA	93953
<input type="checkbox"/>	Rotterdam	Netherlands	Singapore	270	Fuel Oil	Fuel Oil	21/6/2016	5/8/2016	FRONT PAGE	92484
<input type="checkbox"/>	Cayo Arcas	Mexico	Daesan	270	Crude Oil	Maya	12/6/2016	4/8/2016	KARAN	93842
<input type="checkbox"/>	Mina Al Fahal	Oman	Asia	130	Crude Oil	Crude Oil	6/7/2016	1/8/2016	NORDIC 7FNITH	95884

Using the Energy Homepage > Flows, one is able to reach the above page.

In this application, users are able to choose specific oil products in different areas of the world in order to view an overview of vessels that are likely to dock at those ports or about to leave those ports. These information are collated from the vessels' crew themselves or the ports and thus the amount of information available may differ from vessel to vessel or location to location.

The Interactive Map could also be employed here in order to view the likely path travelled by the vessel where users can analyze the potential risks that the vessels may face, such as piracy and weather threats.

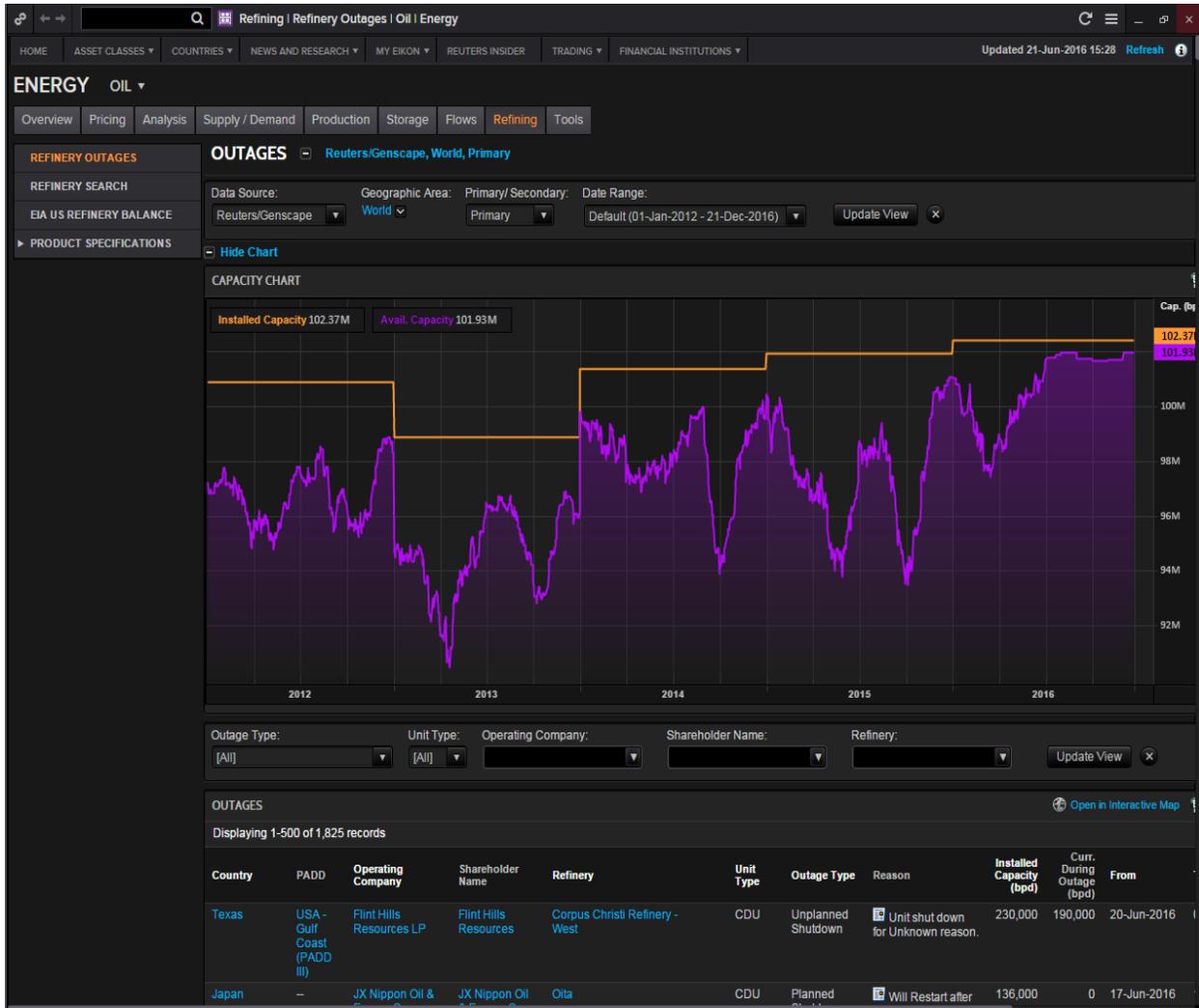
This would allow analysts to forecast potential delays in delivery, which may affect the supply of oil and subsequently the price of oil as well.

## 2. Oil Fundamental Database and Outages <OILOUT>

For users who want a historical record as well as future forecast of oil refinery outages, the Oil Fundamental Database and Outages, **OILOUT** application would be a key application to look at. Whereas Interactive Map (**MAP**) only provides a real-time view, **OILOUT** would be a good application for users to observe past trends of outages and its impact on oil production and price.

To arrive at the following page,

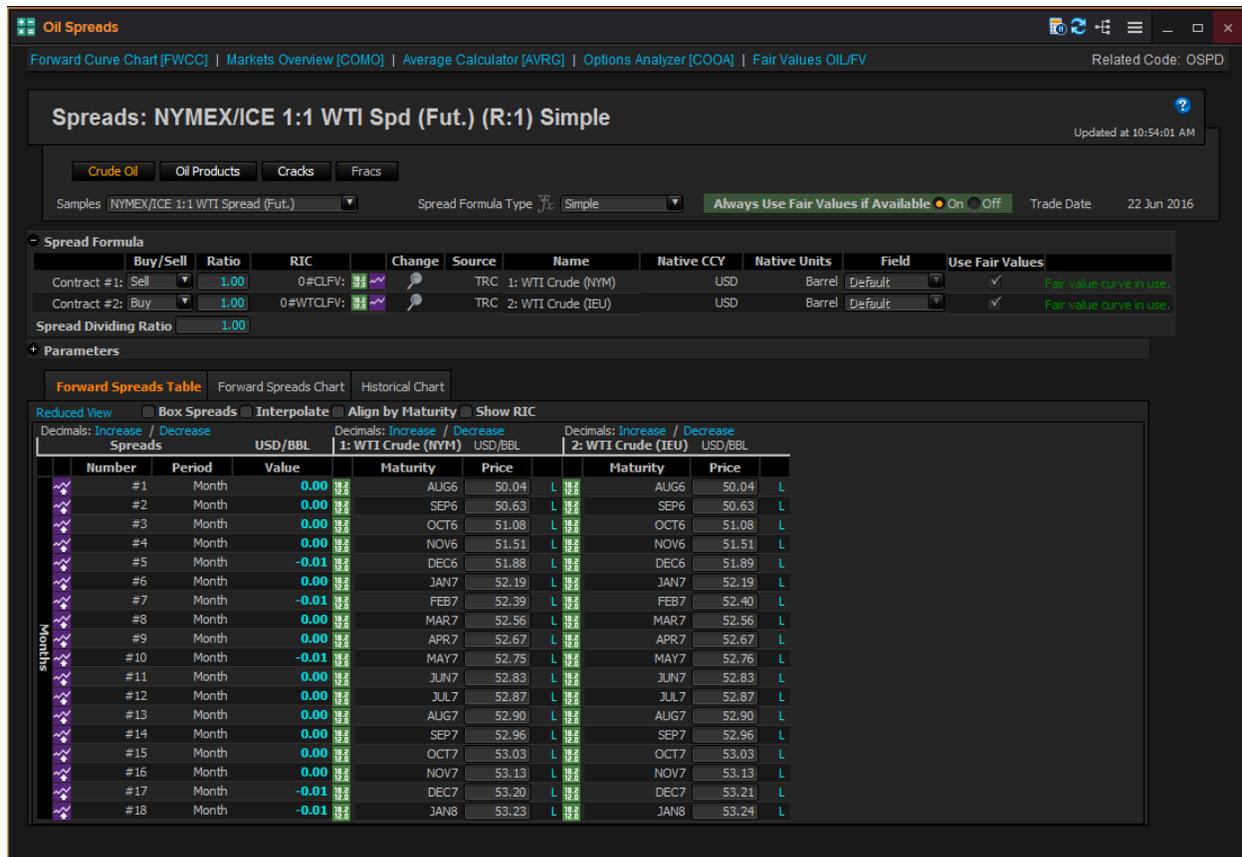
1. In the Eikon Toolbar, type <OILOUT>
2. Toggle with the different settings such as the data source, geographic area and the date range.



### 3. Oil Spreads <OSPD>

The oil spread calculator enables trades to monitor various types of spreads such as those between

1. Crude Oil
2. Oil Products
3. Crack Spreads
4. Fractional Spreads: Profit margin for a gas processor (revenue from LNG minus cost of Natural Gas)



To arrive at the above page,

1. In the Eikon Toolbar, enter <OSPD>
2. Choose the type of spread you would like to monitor (from 1-4 above)
3. Choose the contracts you would like to view (e.g. NYMEX/ICE 1:1 WTI Spread (Fut.))
4. The spread formula allows you to choose a type of calculation formula (simple or complex)
5. Define the contract (which to sell and which to buy)
6. View the underlying prices, calculated spreads and intermonth spreads.
7. If the chart is needed, you could view the historical chart or the forward spreads chart.

### 4. Oil Swaps Overview <OSWO>

The Oil Swaps Overview page gives a one page overview of the different swaps available for different intracommodity and intercommodity swaps. E.g. Brent-WTI swaps and Crude-Fuel Oil swaps or calendar swaps which are swaps between the contracts expiring in July and Aug. The page is a read-only page where details on the page cannot be customized. However, by default, different swaps are provided as shown in the main page snapshot below and the specific market snapshot in the next page.

**OilSwapsOverview [Read-Only]**

**Oil Swaps Overview**

Change Market: Main

OILSWAP/SG		SINGAPORE SWAPS																					
		CRUDE				FUELOIL				DISTILLATE				NAPHTHA									
USD	BRT Fut	BRT sw	BRTsw	Dubai	F0180		F0380		F0 Ew	SG Gasoil	SG 10PPM GO	SG Jet Kero		GO sw	NAPH CFR JP	F0B SG	E-w						
					SWAP	CRACK	CRACK	SWAP	VIS	DIFF	SWAP	CRACK	SWAP	DIFF	SWAP	REG	CRACK	LGO sw	SWAP	CRACK	SWAP	DIFF	
	/BBL	/BBL	/BBL	/BBL	/T	vDUB	vBRT	/T	/T		/BBL	/BBL	/BBL	/BBL	/BBL	/BBL	/BBL	/T	/T	vs BRT	/BBL		
BALMO	-1	50.58	3.82	46.76	-1250.01	-8.30	-12.12	245.76	4.25	19.00	58.35	11.59	59.40	1.05	58.90	0.55	12.14	-14.79	432.25	-2.55	45.60	11	
jun/jul	-1	-0.64		0.14	-2.00			-1.75			0.20		0.13		0.12				0.00			0.00	
JUL16	-1	51.22	4.60	46.62	-1252.01	-7.85	-12.45	247.51	4.50	20.25	58.15	11.53	59.27	1.12	58.78	0.63	12.16	-18.14	432.25	-3.19	45.60	13	
jul/aug	-1	-0.38		-0.36	-2.25			-2.00			-0.13		-0.13		-0.36				-1.25			-0.10	
AUG16	50.58	51.60	4.62	46.98	3.53	254.26	-7.86	-12.48	249.51	4.75	20.50	58.28	11.30	59.43	1.15	59.14	0.86	12.16	-20.29	433.50	-3.43	45.70	15
aug/sep	-0.64	-0.33		-0.37	-2.25			-1.75			-0.14		-0.14		-0.39				-2.00			-0.10	
SEP16	51.22	51.93	4.58	47.35	3.79	256.51	-7.89	-12.47	251.26	5.25	20.75	58.42	11.07	59.62	1.20	59.53	1.11	12.18	-23.07	435.50	-3.54	45.80	17
sep/oct	-0.38	-0.42		-0.40	-2.25			-2.00			-0.14		-0.14		-0.16				-1.50			-0.10	
OCT16	51.60	52.35	4.60	47.75	3.82	258.76	-7.94	-12.54	253.26	5.50	21.00	58.56	10.81	59.86	1.30	59.69	1.13	11.94	-25.18	437.00	-3.79	45.90	16
oct/nov	-0.33	-0.32		-0.42	-2.50			-2.00			-0.40		-0.40		-0.36				-1.50			-0.15	
NOV16	51.93	52.67	4.50	48.17	3.83	261.26	-7.98	-12.48	255.26	6.00	21.50	58.96	10.79	60.38	1.42	60.05	1.09	11.88	-24.52	438.50	-3.95	46.05	16
nov/dec	-0.42	-0.22		-0.32	-2.50			-2.25			-0.40		-0.40		-0.35				-1.75			-0.20	
DEC16	52.35	52.89	4.40	48.49	3.93	263.76	-7.91	-12.31	257.51	6.25	22.25	59.36	10.87	60.87	1.51	60.40	1.04	11.91	-24.18	440.25	-3.97	46.25	16
dec/jan	-0.32	-0.19		-0.31	-2.50			-2.50			-0.30		-0.30		-0.40				-1.50			-0.20	
JAN17	52.67	53.08	4.28	48.80	3.96	266.26	-7.84	-12.12	260.01	6.25	21.25	59.66	10.86	61.26	1.60	60.80	1.14	12.00	-24.66	441.75	-4.00	46.45	16
jan/feb	-0.22	-0.17		-0.20	-1.75			-1.75			-0.30		-0.30		-0.35				-2.25			-0.20	
FEB17	52.89	53.25	4.25	49.00	3.92	268.01	-7.77	-12.02	261.76	6.25	21.25	59.96	10.96	61.48	1.52	61.15	1.19	12.15	-24.75	442.00	-4.14	46.65	15
feb/mar	-0.19	-0.16		-0.19	-1.75			-1.50			-0.24		-0.24		-0.24				0.50			-0.05	
MAR17	53.08	53.41	4.22	49.19	3.88	269.76	-7.69	-11.91	263.26	6.50	21.50	60.20	11.01	61.64	1.44	61.39	1.19	12.20	-24.90	441.50	-4.35	46.70	15
mar/apr	-0.17	-0.17		-0.21	-1.50			-1.25			-0.24		-0.24		-0.21				0.75			-0.05	
APR17	53.25	53.58	4.18	49.40	3.81	271.26	-7.67	-11.85	264.51	6.75	21.50	60.44	11.04	61.75	1.31	61.60	1.16	12.20	-24.88	440.75	-4.61	46.75	15
apr/may	-0.16	-0.18		-0.25	-1.50			-1.25			-0.26		-0.26		-0.29				0.25			-0.05	
MAY17	53.41	53.76	4.11	49.65	3.74	272.76	-7.69	-11.80	265.76	7.00	21.75	60.70	11.05	61.91	1.21	61.89	1.19	12.24	-24.70	440.50	-4.82	46.80	15

**Reuters Energy International News Service**

11:30:41 申午	RTRS - "TOP NEWS" Asian Companies
11:24:48 上午	RTRS - "TOP NEWS"-Front Page
11:18:30 上午	6898.HK 3883.HK RTRS - HK Exchange says 14 firms buy back shares
11:16:56 上午	9984.T 0700.HK RTRS - BREAKINGVIEWS-SoftBank's mixed signals prevent market upgrade
11:12:08 上午	LCOc1 JPY=RTRS - GLOBAL MARKETS-Asia stocks inch up, nerves fray ahead of Brexit vote
11:08:16 上午	RTRS - "TOP NEWS"-Agricultural Commodities
11:06:49 上午	Opw: OpS RTRS - GRAINS-Corn ticks up from 1-mth low, wheat firms after 2 days of falls
11:06:02 上午	RTRS - "TOP NEWS" Euro Zone
11:00:12 上午	RTRS - TABLE-Weekly Japan oil statistics to June 18
	RTRS - JAPAN NAPHTHA STOCKS RISE 46,000 KL TO 1.58 MLN IN WEEK TO

**Asia Oil Product Swaps Market Report**

No Results Found

QUICK\_TIPS.LABEL:  
 QUICK\_TIPS.DUPLICATED\_SOURCES  
 QUICK\_TIPS.CHECK\_CORRECT\_SPELLING  
 QUICK\_TIPS.CHANGE\_SEARCH\_MODE  
 QUICK\_TIPS.OPEN\_SEARCH\_PREFERENCES  
 QUICK\_TIPS.SWITCH\_TO\_GLOBAL\_PRESS  
 QUICK\_TIPS.OPEN\_HELP

**Oil Swaps Overview** Change Market: Crude

A: AS Assessment at 0330 GMT S: AS Settlement at 0830 GMT  
P: EU Assessment at 1130 UKT E: EU Settlement at 1630 UKT

**ICE Brent Futures**

Contract	Real Time	vs. Asian Settle	Time	Latest Fixed Value	Asian Settle	European Settle	Units
AUG16	50.85	0.65	13:47 A	<b>50.82</b>	50.20	49.94	BBL
SEP16	51.47	0.64	13:46 A	<b>51.43</b>	50.83	50.59	BBL
OCT16	51.85	0.68	13:37 A	<b>51.85</b>	51.17	50.98	BBL
NOV16	52.17	0.67	13:42 A	<b>52.17</b>	51.50	51.32	BBL
DEC16	52.58	0.67	13:46 A	<b>52.59</b>	51.91	51.74	BBL
JAN17	52.89	0.68	13:46 A	<b>52.84</b>	52.21	52.05	BBL

**Dubai Swaps**

Contract	Real Time	vs. Asian Settle	Time	Latest Fixed Value	Asian Settle	European Settle	Units
OCT16	48.04	0.70	13:37 A	<b>48.04</b>	47.34	47.15	BBL
NOV16	48.39	0.71	13:43 A	<b>48.39</b>	47.68	47.49	BBL
DEC16	48.71	0.73	13:47 A	<b>48.72</b>	47.98	47.81	BBL
JAN17	49.01	0.75	13:47 A	<b>48.96</b>	48.26	48.09	BBL
FEB17	49.27	0.77	13:43 A	<b>49.22</b>	48.50	48.35	BBL
MAR17	49.51	0.78	13:43 A	<b>49.46</b>	48.73	48.59	BBL

**Exchange of Futures for Swaps (EFS)**

Contract	Real Time	vs. Asian Settle	Time	Latest Fixed Value	Asian Settle	European Settle	Units
AUG16	3.61	0.01	11:42 A	<b>3.61</b>	3.60	3.55	BBL
SEP16	3.83	-0.03	11:42 A	<b>3.83</b>	3.86	3.81	BBL
OCT16	3.81	-0.02	11:42 A	<b>3.81</b>	3.83	3.83	BBL
NOV16	3.78	-0.04	11:42 A	<b>3.78</b>	3.82	3.83	BBL
DEC16	3.87	-0.06	11:42 A	<b>3.87</b>	3.93	3.93	BBL
JAN17	3.88	-0.07	11:42 A	<b>3.88</b>	3.95	3.96	BBL

**Middle East / Asian Cash Crude Market Report**

21 六月 2016  
06:08:17 晚上 RTRS Middle East Crude-Dubai weakens despite Shell's purchases

20 六月 2016  
06:06:12 晚上 RTRS Middle East Crude-Dubai falls for 7th session; Murban's discount widens

**Set Forward Curves**

Yesterday  Today  1 Week Ago  
 1 Month Ago  User Date **31/12/2012**

On the page for specific markets, the list of contracts across time and the charts for the price of the first month contract and its forward curves can be seen.

To navigate to the Oil Swaps Overview page, one should do the following.

1. In the Eikon Toolbar, enter <OSWO>
2. In the “Change Market tab”, one can specify the type of market they are interested in.

# Part 6B: Metals Market

# Eikon shortcuts: Metals

REAL TIME MONITORING	
COPM	Commodities Prices Monitor
LME0	LME Overview
OPW	Option Watch
Q	Quote
QL	Quote List
QLI	Quote Line
SDB	Sidebar
TICK	Ticker

NEWS	
NEWS	News
TOPNEWS	Top News
OPECO	Organization of the Petroleum Exporting Countries
CONM	Commodities News Monitor

CHARTING	
SPDC	Commodities & Energy Spread Chart
FWDC	Forward Curve
FWCC	Forward Curve Chart
METO	Metals Outrights

ANALYTICS AND CALCS	
ASPD	Agriculture Spreads
AVRG	Average Calculator
CALC	Eikon Calculators
COCM	Commodity Curve Monitor
COSP	Commodity Swaps Pricer
CSPD	Cross-Commodity Spreads
EWIN	Platts eWindow Market Data
MAP	Interactive Map
MSPD	Metals Spreads
POWPJM	Power – PJM
TANK	US Weekly Oil Stocks Estimates (API, EIA)
VOLS	Volatility Surface Calculator
MAPTRK	Interactive Map Asset Tracker
HURRICANE	Hurricane Tracker
CFTC	Commodity Futures Trading Commission
FRGHT	Shipping

METALS	
LME0	LME Overview
ALUM	Metals – Aluminium Guide
BASEMET	Metals – Base Metals Guide
COPPER	Metals – Copper Guide
GOLD	Metals – Gold Guide
IRONSTEEL	Metals – Iron & Steel Guide
LEAD	Metals – Lead Guide
MINORMET	Metals – Minor Metals Guide
OTHERMET	Metals – Minor Metals, Ores, Scrap and Secondary Guide
NICKEL	Metals – Nickel Guide
PALLAD	Metals – Palladium Guide
PLAT	Metals – Platinum Guide
PRECMET	Metals – Precious Metals Guide
SILVER	Metals – Silver Guide
TIN	Metals – Tin Guide
URANIUM	Metals – Uranium Guide
ZINC	Metals – Zinc Guide
METO	Metals Outrights
MSPD	Metals Spreads
MET	Metals Fundamental Database
GFMSPREC	GFMS Precious Metals
GFMSBASE	GFMS Base Metals
GFMSAU	GFMS Gold
GFMSCU	GFMS Copper

<b>METALS – APPS &amp; TOOLS FOR INDIVIDUAL METALS (IE XAU= , XAG=)</b>	
<b>Note:</b> In order to see the tools select the metal by hitting the down arrow and then hit the <space> bar. e.g. "XAU= OV" or "Gold OV"	
OV	Overview
QH	Quote History
CHTV	Chart (Commodities Chart view)
ETFH	ETF Holdings
GFMS	GFMS
VOLC	Volatility Chart

<b>COMMODITY FUTURES – APPS &amp; TOOLS FOR INDIVIDUAL METALS (IE XAU= , XAG=)</b>	
OV	Overview
QH	Quote History
CHTV	Chart (Commodities Chart view)
CS	Contract Specifications

<b>MISC – CONTEXTUAL ITEMS FOR COMMODITIES</b>	
Q	Quote
CHT	Chart (Chart object)
NEWS	News
REBC	Rebasing Chart
TEAC	Technical Analysis Chart
HRA	Historical Return Analysis
REGR	Regression Analysis
TAS	Time & Sales component

## 1. Metals Fundamentals Database

The Metals Fundamentals Database provides essential, up-to-date global statistics for all known aluminium, copper, zinc, lead, nickel, platinum and gold operations around the world.

To arrive at the following page, one can do the following

Home>Asset Classes> Commodities> Metals> Fundamentals Database

OR to search <Metals Fundamentals Database> in the Eikon Toolbar.

The screenshot displays the Thomson Reuters Metals Fundamentals Database interface. At the top, there are navigation tabs for 'METALS' and 'FUNDAMENTALS DATABASE'. Below this, there are filters for 'Commodity', 'Metal', 'Plant Type', and 'Measurement Unit', all set to 'Base Metals', '[All Metals]', '[All Plant Types]', and 'Tonnes' respectively. A world map is shown on the left, and an 'AGGREGATED DATA' table is on the right, showing production and capacity for various metals in 2016. Below the table is a 'LATEST NEWS' section with a table of recent news items.

Metal (Refined)	Capacity	Production	Capacity %
Copper	29,319	22,672	77.33
Lead	14,222	11,176	78.58
Nickel	2,765	1,942	70.24
Primary Aluminium	66,256	53,462	80.69
Zinc	16,847	13,786	81.83

Metal	Plant Type	Country	Plant Company	Plant Name	Note
MAL	SM	China	Various	Various Primary Aluminium	21-Jun-2016 COLUMN: In aluminum market it's still China versus rest of world-Andy Home
MCU	MINE	Australia	Independence Group NL	Jaguar	21-Jun-2016 Goldcorp Inc says to acquire 10.9 mln shares of Independence Gold
MCU	MINE	Argentina	Minera Alumbrera Ltd	Alumbrera	21-Jun-2016 Goldcorp Inc says to acquire 10.9 mln shares of Independence Gold
MCU	MINE	China	Various	Various Copper Mine	21-Jun-2016 Copper market in 40,000 tonnes deficit in Mar 2016 - ICSG
MCU	REF	China	Various	Various Copper Refinery	21-Jun-2016 Copper market in 40,000 tonnes deficit in Mar 2016 - ICSG
MCU	MINE	Philippines	Carmen Copper Corp	Toledo	21-Jun-2016 Philippines' Duterte says to review mining projects
MAL	SM	Russia	AO Novokuznetsk Aluminium (NkAZ)	Novokuznetsk	20-Jun-2016 Rusal may cut capacity if aluminium falls below \$1,500/T-RIA
MAL	SM	Russia	United Company RUSAL	Kandalaksha	20-Jun-2016 Rusal may cut capacity if aluminium falls below \$1,500/T-RIA
MAL	SM	Russia	AO Krasnoyarsk Aluminium (KRAZ)	Krasnoyarsk	20-Jun-2016 Rusal may cut capacity if aluminium falls below \$1,500/T-RIA
MPB	REF	Kazakhstan	Kazzink	Ust-Kamenogorsk	17-Jun-2016 Kazakhstan's Jan-May 2016 refined lead output up 48 pct/yr

Information on the Fundamentals Database is derived from industry experts, Reuters editorials, Company News Releases and Archived news.

On the Fundamentals Database, users can view information about the different production plants in different parts of the world or to refer to the plant view for key notes, an aggregate database of the past 5 years production capacity, comparison between metals etc.

For example, users can find the name of the South African plant with the second highest platinum production figures amongst 2016 estimates and the plant's shareholding companies and the breakdown of holdings.

Also, shareholder production reports can also be retrieved to find the percentage of a certain metal attributable to individual companies.

## 2. GFMS

### Mine Economics

Another page where users can obtain information about Metal Fundamental Data is the GFMS Mine Economics Page. This page provides users data on gold mines, such as detailed production and cost forecasts for the next 15 years, for over 350 major gold mines and projects globally.

To reach the following page,

Users can search <MINECS> in the search bar OR

Home> Asset Classes> Commodities> Metals> Precious Metals>Mine Economics

The screenshot shows the 'MINE INDEX' section of the GFMS website. It features a table with columns for Mine, Country, Holding (%), Name, RIC, Status, and Primary Product. The table lists various gold mines from different countries, including Australia, Argentina, Ghana, Kazakhstan, Russia, and the United States.

Mine	Country	Holding (%)	Name	RIC	Status	Primary Product
Agnew/Lawlers	Australia	100.00	Gold Fields Ltd	GFJ.J	Operating	GOLD
Agua Rica	Argentina	100.00	Yamana Gold	-	Feasibility	GOLD
Ahafo	Ghana	90.00 10.00	Newmont Govt of Ghana	NEM.N GVD-GH	Operating	GOLD
Aksu	Kazakhstan	100.00	Private investor(s)	-	Operating	GOLD
Akyem	Ghana	100.00	Newmont	NEM.N	Operating	GOLD
Albazino	Russia	100.00	Polymetal	POLY.P.L	Operating	GOLD
Albyn	Russia	100.00	Petropavlovsk	-	Operating	GOLD
Aldiss-Randalls	Australia	100.00	Silver Lake Resources	-	Historic	GOLD
Alumbrera	Argentina	50.00 37.50 12.50	GlencoreXstrata Goldcorp Yamana Gold	G.TO YRLTO	Operating	GOLD
AngloGold Mineracao	Brazil	100.00	AngloGold Ashanti	ANGJ.J	Operating	GOLD
Angostura	Colombia	100.00	Eco Oro Minerals	EOM.TO	Feasibility	GOLD
Antapite	Peru	100.00	Buenaventura	BUEV.LM	Operating	GOLD
Asacha	Russia	100.00	Trans-Siberian Gold	TSG.L	Operating	GOLD
Aurizona	Brazil	100.00	Luna Gold	LGC.TO	Operating	GOLD
Aurora	Guyana	100.00	Guyana Goldfields Inc.	-	Commissioning	GOLD
Bald Mountain	United States	100.00	Kinross Gold Corporation	-	Operating	GOLD
Ballarat	Australia	100.00	LionGold Corp	LION.SI	Operating	GOLD
Bambanani	South Africa	100.00	Harmony Gold	HARJ.J	Operating	GOLD
Baomahun	Sierra Leone	100.00	Amara Mining	AMARA.L	Feasibility	GOLD
Barberton	South Africa	100.00	Pan African Resources	PANJ.J	Operating	GOLD
Batu Hijau	Indonesia	35.44 27.56 20.00 17.00	Newmont Sumitomo Corp PT Pakuafu Indah Private investor(s)	NEM.N 8053.T -	Operating	GOLD
Beaconsfield	Australia	100.00	Beaconsfield Gold	BCD.AX	Historic	GOLD
Beatrix	South Africa	100.00	Sibanye Gold Limited	-	Operating	GOLD
Berezitovy	Russia	99.00	Nord Gold	-	Operating	GOLD
Bestöbe	Kazakhstan	100.00	Private investor(s)	-	Operating	GOLD
Bibiani	Ghana	90.00 10.00	Resolute Mining Ghana Government	-	Care and maintenance	GOLD
Bingham Canyon	United States	100.00	Rio Tinto	RIOL	Operating	GOLD

Under Mine Index, a detailed overview of different mines, their countries and their shareholders can be found. From here, we can view the statuses of these mines.

Under country analysis, we can view the All-in-Cost curves of different countries and to find out how a certain country compares to other countries and which country has the highest gold mining costs.

Lastly, advanced search would allow you to search up on specific mines, countries and companies.

### Forecast and Research

GFMS provide independent analysis and research into the metals markets combined with outlooks and forecasts covering all key traded metals over a wide range of forward and historic periods.

The list of GFMS Pages available on Eikon is as follows. Simply search the respective code (located in the first column) in the Eikon Toolbar for the individual pages.

GFMSPD	GFMS Palladium Homepage	Palladium market commentary and research homepage from GFMS.
GFMSPREC	GFMS Precious Metals Homepage	Precious Metals Analysis and research from GFMS
GFMSBASE	GFMS Base Metals Homepage	Base Metals Analysis and research from GFMS
GFMSPT	GFMS Platinum Homepage	Platinum market commentary and research homepage from GFMS.
BASEMINEC	GFMS Mine Economics: Copper	Thomson Reuters Copper Cost Service, updated on a quarterly basis from company releases to provide the market the most current operating and cost data.
GFMSAG	GFMS Silver Homepage	Silver market commentary and research homepage from GFMS.
GFMSCU	GFMS Copper Homepage	Copper market commentary and research homepage from GFMS
GFMSAU	GFMS Gold Homepage	Gold market commentary and research homepage from GFMS
GFMSZN	GFMS Zinc Homepage	Zinc market commentary and research homepage from GFMS

On the individual Eikon pages, a summary of the supply and demand of the various types of metals can be seen. Also, a price comparison of different similar metals (e.g. all the base metals) are presented in a chart for easy comparison and analysis. The official 3M contract on LME is also presented for the users to view together.



### 3. News

There are 3 common ways for users to obtain Reuters News on all metals, namely, base, precious and minor metals.

1. Press **F9** to open the News App and search the specific metals' news you are interested in

Time	Source	RICs	Headline
05:25:31 下午	DJN	CHZHY.PK 1333.HK	DJ HK Bourse: Announcement From China Zhongwang Holdings Ltd. -4- 1333.HK CHZHY.PK
05:23:38 下午	PLTS	PMA702 PMA700	PLATTS: 702--Heard in the markets (from p701) PMA0700 PMA0702
05:23:38 下午	PLTS	PMA702 PMA701	PLATTS: 701--Heard in the markets (from p700) PMA0700 PMA0701
05:23:38 下午	PLTS	PMA701 PMA700	PLATTS: 700--Heard in the markets 108: Platts IO: 62.7%-Fe Australian Newman fines -- A cargo heard offered at \$54/dmt CFR Qingdao on PMA0700
05:22:50 下午	RTRS	1333.HK	CHINA ZHONGWANG HOLDINGS LTD 1333.HK SAYS YINGKOU ZHONGWANG ENTERED INTO YINGKOU-HEAVYMACH CONTRACTS WITH SINO-HEAVYMACH 1333.HK
05:22:48 下午	PLTS	PMA180 PMA0180	PLATTS: 180--Asia physical premiums: India's Vedanta offers 15,000 mt aluminum ingot PMA0180
05:22:44 下午	RTRS	1333.HK	CHINA ZHONGWANG HOLDINGS LTD 1333.HK - DEAL FOR TOTAL CONSIDERATION OF RMB3.13 BLN 1333.HK
05:22:39 下午	RTRS	1333.HK	CHINA ZHONGWANG - YINGKOU ZHONGWANG, A WHOLLY-OWNED SUBSIDIARY OF THE COMPANY, ENTERED INTO YINGKOU- TAIZHONG CONTRACTS WITH TAIZHONG BINHAI 1333.HK
05:22:39 下午	RTRS	1333.HK	CHINA ZHONGWANG HOLDINGS LTD 1333.HK - PANJIN ZHONGWANG ENTERED INTO PANJIN-TAIZHONG CONTRACTS WITH TAIZHONG BINHAI 1333.HK
05:22:12 下午	HIIS	1333.HK	PURCHASE OF ALUMINIUM EXTRUSION PRODUCTION EQUIPMENT(with URL) 1333.HK
05:21:59 下午	RTRS	1333.HK	CHINA ZHONGWANG-PURCHASE OF ALUMINIUM EXTRUSION PRODUCTION EQUIPMENT 1333.HK 1333.HK
05:21:06 下午	PLTS	PMA702 PMA700	PLATTS: 702--Heard in the markets (from p701) PMA0700 PMA0702
05:21:06 下午	PLTS	PMA702 PMA701	PLATTS: 701--Heard in the markets (from p700) PMA0700 PMA0701
05:21:06 下午	PLTS	PMA702 PMA700	PLATTS: 700--Heard in the markets 107: Platts IO: 61%-Fe Australian Pilbara Blend fines -- Carao bid at

2. Use the Advanced News Search function.

Home > News and Research > Advanced News Search

**ADVANCED NEWS SEARCH**

CRITERIA

Search for:  • Headlines Only • Headlines and Story Text

Companies: [Select](#) <Any> [Reset](#)

Markets: [Select](#) <Any> [Reset](#)

Business Sectors: [Select](#) <Any> [Reset](#)

Geographies: [Select](#) <Any> [Reset](#)

More Topics: [Select](#) <Any> [Reset](#)

Languages: [Select](#) <Any> [Reset](#)

Sources: [Select](#) <Any> [Reset](#)

Reports: [Select](#) <Any> [Reset](#)

Select Date / Range : From  hh:mm To  hh:mm [dd-MMM-yyyy] [Reset](#)

3. View Top News to find specific news on that market

Home > News and Research > Reuters Top News > Commodities Markets

Alternatively, going to the Homepage for the different metals would display the top news for each metal type as well.

## 4. London Metal Exchange

The London Metal Exchange is the largest market of exchange for base metals, with over 80% of all base metal futures businesses transacted on it.

There are three trading methods at the LME; the Ring, 24 hour telephone and LME Select.

### Ring Trading

During Ring Trading, an open outcry takes place in a ring where each base metal trades for 5 minutes in the ring, twice in the morning and twice in the afternoon.

The different times for Ring Trading can be obtained through the following steps.

1. Press F4 to open the quote app
2. Type <LME/TIMES1> for the morning ring session timings and <LME/TIMES2> for the afternoon timings

Note that other than the 4 ring sessions, there is also something called KERB trading. KERBS are trading periods in between the ring sessions where all metals are traded simultaneously by all traders. This takes place twice a day at 13.25-14.45 and 16.15-17.00.

The London Metal Exchange - Trading Times		LME/TIMES1
===== LME MORNING TRADING TIMES =====		
Global Inter-office Trading:	Available 24 hours a day	
LME Ring	Available from 11:40 - 17:00 (London time)	
Steel Billet	11:40 - 11:45	} 1st Morning Ring Sessions
NAASAA & Al.Alloy	11:45 - 11:50	
Tin:	11:50 - 11:55	
Primary Aluminium:	11:55 - 12:00	
Copper:	12:00 - 12:05	
Lead:	12:05 - 12:10	
Zinc:	12:10 - 12:15	
Nickel:	12:15 - 12:20	
Cobalt & Molybdenum	12:20 - 12:25	
INTERVAL	12:25 - 12:30	
Copper:	12:30 - 12:35 (Officials)	} 2nd Morning Ring Session
NASAA & Al.Alloy	12:35 - 12:40 (Officials)	
Tin:	12:40 - 12:45 (Officials)	
Lead:	12:45 - 12:50 (Officials)	
Zinc:	12:50 - 12:55 (Officials)	
Primary Aluminium:	12:55 - 13:00 (Officials)	
Nickel:	13:00 - 13:05 (Officials)	
Premium Aluminium	13:05 - 13:10 (Officials)	
Steel Billet	13:10 - 13:15 (Officials)	
Interval:	13:15 - 13:25	
MORNING KERB:	13:25 - 14:45	

### Inter-Office Trading

This is the 24 hour telephone market ran by LME Brokers

### LMeselect Trading

LMeselect is the exchange operated electronic trading platform which operates from 01:00 - 19:00 London Time

## 5. Metals Outright and Arbitrage <METO>

The Metal Outrights calculator allows users to calculate real-time and historical swap points, cross swap points and outright for commodity contracts on standard maturities and broken dates. It also calculates forward forwards on broken dates, and pricing, sensitivity, and hedging information for options on commodities contracts.

To arrive at the calculator, simply type <METO> in the Eikon Toolbar.

**Outrights: LME Aluminium**  
LME

Updated at 9:34:24 AM

Market: Base Metals Trade Date: 23 Jun 2016 Currency: USD  
Contract A: LME Aluminium Benchmark RIC: Fair Value LME 3M MALOUT3

3M ALUMINIUM Bid: 1,628.00 Ask: 1,629.50

**Outrights** No Arbitrage Spread Arbitrage Ratio Arbitrage

**Calculation Parameters**  
Long Periods: No Metal Display: Bid/Ask  
Interpolation Method: Linear Bid/Ask Spread (A): Native  
Calendar Style: LME Calendar

**Data Table**  
Calendar Style: LME

Period	End Date	Days	Outrights (USD)		Intermonth (USD)		Bmk Spread (USD)	
Cash	27 Jun 2016	0	1,619.75	1,620.75			-8.25	-8.75
JUL16	20 Jul 2016	23	1,622.75	1,623.75	-4.00	-2.00	-5.25	-5.75
AUG16	17 Aug 2016	51	1,625.25	1,626.25	-3.50	-1.50	-2.75	-3.25
SEP16	21 Sep 2016	86	1,629.25	1,630.25	-5.00	-3.00	1.25	0.75
3M	23 Sep 2016	88	1,628.00	1,629.50			0.00	0.00
OCT16	19 Oct 2016	114	1,630.75	1,631.75	-2.50	-0.50	2.75	2.25
NOV16	16 Nov 2016	142	1,632.75	1,633.75	-3.00	-1.00	4.75	4.25
DEC16	21 Dec 2016	177	1,634.75	1,635.75	-3.00	-1.00	6.75	6.25
JAN17	18 Jan 2017	205	1,635.25	1,636.25	-1.50	0.50	7.25	6.75
FEB17	15 Feb 2017	233	1,637.75	1,638.75	-3.50	-1.50	9.75	9.25
MAR17	15 Mar 2017	261	1,640.25	1,641.25	-3.50	-1.50	12.25	11.75
APR17	19 Apr 2017	296	1,643.50	1,644.50	-4.25	-2.25	15.50	15.00
MAY17	17 May 2017	324	1,646.24	1,647.26	-3.76	-1.74	18.24	17.76
JUN17	21 Jun 2017	359	1,649.24	1,650.26	-4.02	-1.98	21.24	20.76
SEP17	20 Sep 2017	450	1,658.24	1,659.26	-10.02	-7.98	30.24	29.76
DEC17	20 Dec 2017	541	1,666.99	1,668.01	-9.77	-7.73	38.99	38.51
MAR18	21 Mar 2018	632	1,677.98	1,679.02	-12.03	-9.97	49.98	49.52
JUN18	20 Jun 2018	723	1,688.73	1,689.77	-11.79	-9.71	60.73	60.27

**Tools** Rows: Insert / Delete Outrights Decimals: Increase / Decrease

**Broken Dates** Average Average Swap Chart

Force LME Dates

End	End Date	Days	Outrights (USD)		Bmk Spread (USD)	
1M15D	17 Aug 2016	51	1,625.25	1,626.25	-2.75	-3.25
90D	21 Sep 2016	86	1,629.25	1,630.25	1.25	0.75
3M	21 Sep 2016	86	1,629.25	1,630.25	1.25	0.75
7M	18 Jan 2017	205	1,635.25	1,636.25	7.25	6.75
6M	21 Dec 2016	177	1,634.75	1,635.75	6.75	6.25

Users may find the METO outlay to be largely similar to that of the SPO application. However, whilst the SPO calculator is limited to calculating swap points and outright of different currency pairs, the METO calculator is able to calculate arbitrage opportunities of spread and ratio arbitrage. More will be covered within this section.

### Calculating Forwards

To utilize the METO calculator for non arbitrage situations, the following information should be specified.

1. Market: Base, Precious Metals or Steel
2. Which contract is being traded.
3. Trade Date

The figures for different periods would be presented. One thing to note is the “BMK Spread” located in the last column. This represents the spread between the 3M forward and the chosen maturity. The 3M forward for commodities is the benchmark rate.

### Calculating Arbitrage

When a commodity future is offered on more than one exchange, a trader may be able to earn spread arbitrage by buying the commodity on one exchange and selling on the other. It is also possible to earn ratio arbitrage by buying and selling similar commodity futures in different currencies. For such contracts, METO calculates these two arbitrage amounts and provides a breakdown of the costs involved in making the trade.

Currently, there are 4 contract pairs available for spread and ratio arbitrage.

1. LME Aluminium v SHFE Aluminium
2. LME Zinc v SHFE Zinc
3. LME Copper v SHFE Copper
4. LME Copper v CMX Copper

Note that ratio arbitrage with a commodity is similar to foreign exchange arbitrage since the spread is earned by taking advantage of a difference in the prices of the currencies used by contracts A and B.

Choose: A/B to display the arbitrage as a spread on CurBCurA and vice versa.

**Spread and Ratio Arbitrage** can only be conducted with Base Metals as Precious Metals and Steel is only available for outright calculations.

### Spread Arbitrage

To utilize the METO calculator to calculate spread arbitrage opportunities, the following can be done

1. Set the market to “Base Metals”
2. Choose the contract you would like to trade
3. Choose the trade date
4. Specify the arbitrage currency

The spread arbitrage would be displayed in the last column.

Ratio Arbitrage

The screenshot shows the METO software interface for 'Outrights: LME Aluminium'. The interface is divided into several sections:

- Market and Contracts:** Market is set to 'Base Metals'. Contract A is 'LME Aluminium' (Buy) and Contract B is 'SHFE Aluminium' (Sell).
- Trade Date:** Set to 23 Jun 2016.
- Price Adjustments:** Includes fields for Premium, Outcharge, Fees, Freight Costs, Duties, and VAT for both LME and SHFE Aluminium.
- Calculation Parameters:** Includes options for Long Periods, Interpolation Method, and Calendar Style.
- Data Table:** A table with columns: Period, End Date, Days, Outrights, Fixed Costs, Variable Costs, Outrights\*, Outrights, Fixed Costs, Variable Costs, Outrights\*, FX Outrights, Ratio, and Currency Arbitrage. The table shows data for various periods from 2016 to 2018.

The layout of the spread and ratio arbitrage calculators are similar with the last three columns being absent in the spread arbitrage calculator, instead being replaced by a “Spread Arbitrage” column instead.

To utilize the METO calculator to calculate ratio arbitrage opportunities, the same information should be entered into the calculator.

1. Set the market to “Base Metals”
2. Choose the contracts to be traded
3. Choose the trade date
4. Select whether you want taxes and costs to be included in the arbitrage
5. Include any freight and outright fees.

## 6. Metals Spreads <MSPD>

Users may utilize the metal spread calculator to hedge or speculate in the commodity market by viewing how the price of 1 metal performs against another. This provides an estimate on future price direction.

On Eikon, type <MSPD> in the Eikon Toolbar to open the calculator to bring up spreads for the following Base and Precious Metals.

### Base Metals

1. LME/NYMEX 1:1 Copper Spread
2. NYMEX/SHFE 1:1 Copper Spread
3. LME/SHFE 1:1 Copper Spread
4. LME/SHFE 1:1 Aluminium Spread
5. LME/SHFE 1:1 Zinc Spread
6. Base Metals Intermonth

### Precious Metals

1. MCX-Comex 1:1 Gold Spread
2. NYMEX 1:1 Plat/Gold Spread
3. NYMEX 1:1 Silver/Gold Spread
4. TOCOM 1:1 Plat/Gold Spread
5. TOCOM 1:1 Silver/Gold Spread
6. NYMEX/TOCOM 1:1 Gold Spread
7. NYMEX/TOCOM 1:1 Silver Spread
8. NYMEX/TOCOM 1:1 Platinum Spread
9. NYMEX/TOCOM 1:1 Palladium Spread
10. Precious Metals Intermonth

The screenshot displays the 'Metals Spreads' application window. The main title is 'Spreads: MCX-COMEX 1:1 Gold Spread (R:1) Simple'. Below the title, there are tabs for 'Base Metals' and 'Precious Metals', with 'Precious Metals' selected. The 'Samples' dropdown is set to 'MCX-COMEX 1:1 Gold Spread'. The 'Spread Formula Type' is set to 'Simple'. There are checkboxes for 'Always Use Fair Values if Available' (On) and 'Trade Date' (23 Jun 2016).

The 'Spread Formula' section shows two contracts:
 

- Contract #1: Sell, Ratio 1.00, RIC 0#MAU, MCI 1: IN MCX Gold, INR, Tola, Default.
- Contract #2: Buy, Ratio 1.00, RIC 0#GCFV, TRC 2: US Gold (CMX), USD, Troy Ounce, Default.

 The 'Spread Dividing Ratio' is set to 1.00.

The 'Parameters' section includes 'Forward Spreads Table', 'Forward Spreads Chart', and 'Historical Chart'. The 'Forward Spreads Table' is expanded, showing a table with columns for Number, Period, Value, Maturity, Price, and Outrights. The table is filtered by 'Months' and shows 18 rows of data.

Number	Period	Value	Maturity	Price	Outrights
#1	Month	-180.44	AUG6	30,091.00	67.84000
#2	Month	-160.32	OCT6	30,332.00	67.84000
#3	Month	-153.20	DEC6	30,622.00	68.19250
#4	Month	-119.65	FEB7	31,431.00	68.90000
#5	Month	-134.16	APR7	31,678.00	69.60927
#6	Month	-143.95	JUN7	31,925.00	70.20588
#7	Month				70.86302
#8	Month				71.55100
#9	Month				72.23285
#10	Month				72.88186
#11	Month				73.55303
#12	Month				74.22419
#13	Month				74.87334
#14	Month				75.55551
#15	Month				75.55551
#16	Month				75.55551
#17	Month				75.55551
#18	Month				75.55551

1. Specifying the Samples that you wish to view the Spread on
2. Choose which contract to buy and sell
3. Hover over the “fx” function to view the formula used (Simple or Complex)

## Part 6C: Agriculture Market

# Eikon shortcuts: Agriculture

REAL TIME MONITORING	
COPM	Commodities Prices Monitor
LME0	LME Overview
OPW	Option Watch
Q	Quote
QL	Quote List
QLI	Quote Line
SDB	Sidebar
TICK	Ticker

NEWS	
NEWS	News
TOPNEWS	Top News
OPECO	Organization of the Petroleum Exporting Countries
CONM	Commodities News Monitor

CHARTING	
SPDC	Commodities & Energy Spread Chart
FWDC	Forward Curve
FWCC	Forward Curve Chart
METO	Metals Outrights

AGRICULTURE	
AGRI	Agriculture Guide
ASPD	Agriculture Spreads
BARLEY	Agriculture – Barley Guide
BIODIESEL	Agriculture – Biodiesel Guide
BIOFUELS	Agriculture – Biofuels Guide
COCOA	Agriculture – Cocoa Guide
COFFEE	Agriculture – Coffee Guide
CORN	Agriculture – Corn/Maize Guide
ETHANOL	Agriculture – Ethanol Guide
FERT	Agriculture – Fertilizer Guide
FORESTRY	Agriculture – Forestry/Fibre Guide
GRAINS	Agriculture – Grains Guide
LIVESTOCK	Agriculture – Livestock/Dairy Guide
OILMEALFEED	Agriculture – Oilseeds/Meals/Feeds Guide
VEGOIL	Agriculture – Other VegOils/Meals Guide
PALMOIL	Agriculture – Palm Oil Guide
RAPCAN	Agriculture – Rapeseed/Canola Guide
RUBBER	Agriculture – Rubber Guide
SOFTS	Agriculture – Softs Guide
SOY	Agriculture – Soybeans Guide
SUGAR	Agriculture – Sugar Guide
WHEAT	Agriculture – Wheat Guide

ANALYTICS AND CALCS	
ASPD	Agriculture Spreads
AVRG	Average Calculator
CALC	Eikon Calculators
COCM	Commodity Curve Monitor
COSP	Commodity Swaps Pricer
CSPD	Cross-Commodity Spreads
EWIN	Platts eWindow Market Data
MAP	Interactive Map
MSPD	Metals Spreads
POWPJM	Power – PJM
TANK	US Weekly Oil Stocks Estimates (API, EIA)
VOLS	Volatility Surface Calculator
MAPTRK	Interactive Map Asset Tracker
HURRICANE	Hurricane Tracker
CFTC	Commodity Futures Trading Commission
FRGHT	Shipping

SEARCHES	
AGRISRCH	Agriculture – Advanced Search
ANSWERS	Eikon Answers
ENESRCH	Energy – Advanced Search
METSRCH	Metal – Advanced Search
OILREF	Oil Refineries Advanced Search
PHYSICALSRCH	Commodities Physical Assets – Advanced Search
SRCH	Advanced Search
WEATHERSRC	Weather – Advanced Search

HELP	
FAQ	Frequently Asked Questions
HELP	Online Help

## 1. Overview

Agricultural commodities are the first commodities to have been traded and remain the most important due to man's need for food. Agriculture futures are popular exchange-traded products where two parties take up short (agree to sell) and long (agree to buy) positions.

For example, a farmer would be the holder of a short wheat position (agreeing to sell) and the bread maker could be the holder of the long position (agreeing to buy)

Below are a list of common agricultural products which can be found in Eikon

Types of Agricultural Products	Examples
Grains	Corn Wheat Barley
Softs	Coffee Cocoa Sugar
Oilseeds/Meals/Feeds	Soybean Soybean Oil Soybean Meal
Biofuels	Ethanol
Livestock/Dairy	Cattle/Beef Hog/Pig Milk
Fertiliser	Ammonia Nitrogen Phosphate Potash Sulphur Fertiliser
Forestry/Fibre	Cotton Wool Lumber

## 2. Product Exchange

Commodity exchanges are exchanges where numerous commodity derivatives are traded. Some exchanges trade in the open outcry style, similar to that of the LME, or electronically.

If you go long in the market, you are buying a contract and you expect the price to rise and hence you are considered “bullish”, If you go short, you are selling a particular contract and are expecting the price to fall and thus you are considered “bearish”. To prevent having to meet a contractual obligation, a buyer or seller must liquidate his futures contract and this is known as offsetting a futures position.

Some common agricultural exchanges are CME Group (CBOT, KCBT), Intercontinental Commodity Exchange (ICE), and Tokyo Commodity Exchange (TOCOM) etc.

For example, to obtain a list or quotes for the most liquid futures from CBOT, LIFFE, Minneapolis and ICE Futures Canada, one can,

1. Press F4 to open the quote app
2. Type <GRAINGRAIN> or <GRAINGRAIN2>

GRAINGRAIN Quote													
Grains & Oilseeds Composite Page													
GBP 1.4799/00		EUR 1.1345/50		JPY 104.60/65		BFO- 48.46/48		BFO-1M 50.41/43		BFO-2M 51.01/03			
KCBT WHEAT <KWVIEW1>				Bid	Ask	Vol	Sprd	CBOT CORN <CVIEW1>					
JUL6	433	0	432 <sup>1</sup> / <sub>4</sub> /432 <sup>3</sup> / <sub>4</sub>	328	-17.25			JUL6	390 <sup>3</sup> / <sub>4</sub>	-2 <sup>1</sup> / <sub>4</sub>	390 <sup>1</sup> / <sub>2</sub> /390 <sup>3</sup> / <sub>4</sub>	9460	-5 <sup>1</sup> / <sub>2</sub>
SEP6	450 <sup>1</sup> / <sub>4</sub>	-0 <sup>3</sup> / <sub>4</sub>	450 <sup>1</sup> / <sub>4</sub> /450 <sup>1</sup> / <sub>4</sub>	445	-25.25			SEP6	396	-2 <sup>1</sup> / <sub>4</sub>	396 <sup>1</sup> / <sub>4</sub> /396 <sup>1</sup> / <sub>4</sub>	7606	-5 <sup>1</sup> / <sub>2</sub>
DEC6	475 <sup>1</sup> / <sub>2</sub>	-1	475 <sup>1</sup> / <sub>4</sub> /475 <sup>1</sup> / <sub>2</sub>	170	-17.50			DEC6	401 <sup>1</sup> / <sub>2</sub>	-2 <sup>1</sup> / <sub>4</sub>	401 <sup>1</sup> / <sub>4</sub> /401 <sup>1</sup> / <sub>2</sub>	7799	-7 <sup>1</sup> / <sub>2</sub>
MAR7	493	0	491 <sup>1</sup> / <sub>4</sub> /492 <sup>1</sup> / <sub>4</sub>	3	-10.75			MAR7	409	-1 <sup>1</sup> / <sub>4</sub>	408 <sup>3</sup> / <sub>4</sub> /409	1995	-3 <sup>1</sup> / <sub>4</sub>
MAY7			502 <sup>1</sup> / <sub>4</sub> /503		-7.50			MAY7	412 <sup>1</sup> / <sub>4</sub>	-2	412 <sup>1</sup> / <sub>4</sub> /412 <sup>1</sup> / <sub>4</sub>	101	-2 <sup>1</sup> / <sub>2</sub>
MGE WHEAT <MVIEW1>				Bid	Ask	Vol	Sprd	CBOT WHEAT <WVIEW1>					
JUL6	525 <sup>1</sup> / <sub>2</sub>	+0 <sup>1</sup> / <sub>4</sub>	525 <sup>1</sup> / <sub>2</sub> /525 <sup>3</sup> / <sub>4</sub>	43	-10.50			JUL6	459 <sup>1</sup> / <sub>4</sub>	+0 <sup>1</sup> / <sub>2</sub>	459 <sup>1</sup> / <sub>4</sub> /459 <sup>1</sup> / <sub>4</sub>	1850	-13
SEP6	536	+1 <sup>1</sup> / <sub>4</sub>	535 <sup>1</sup> / <sub>4</sub> /536	72	-14.50			SEP6	472 <sup>1</sup> / <sub>4</sub>	0	472 <sup>1</sup> / <sub>4</sub> /472 <sup>1</sup> / <sub>4</sub>	2466	-20 <sup>1</sup> / <sub>2</sub>
DEC6	550 <sup>1</sup> / <sub>2</sub>	+1 <sup>1</sup> / <sub>4</sub>	549 <sup>1</sup> / <sub>4</sub> /550 <sup>1</sup> / <sub>2</sub>	12	-12.00			DEC6	493	0	492 <sup>1</sup> / <sub>4</sub> /493 <sup>1</sup> / <sub>4</sub>	512	-19 <sup>1</sup> / <sub>2</sub>
MAR7	562 <sup>1</sup> / <sub>2</sub>	+0 <sup>1</sup> / <sub>4</sub>	562 <sup>1</sup> / <sub>4</sub> /563 <sup>1</sup> / <sub>2</sub>	2	-7.50			MAR7	513 <sup>1</sup> / <sub>2</sub>	+1	512 <sup>1</sup> / <sub>2</sub> /512 <sup>1</sup> / <sub>2</sub>	28	
MAY7			570 <sup>1</sup> / <sub>2</sub> /571 <sup>1</sup> / <sub>2</sub>		-11.00			MAY7			522 <sup>1</sup> / <sub>4</sub> /523 <sup>1</sup> / <sub>4</sub>		
WCE CANOLA <O#RS:>				Bid	Ask	Vol	Sprd	CBOT SOYBEANS <SVIEW1>					
JUL6	480.00	0	479.30/480.50	6	-10.50			JUL6	1135	-2 <sup>1</sup> / <sub>2</sub>	1134 <sup>1</sup> / <sub>2</sub> /1135 <sup>1</sup> / <sub>2</sub>	4008	0 <sup>1</sup> / <sub>2</sub>
NOV6	490.50	-0.40	490.20/491.40	11	-6.10			AUG6	1134 <sup>1</sup> / <sub>2</sub>	-3	1133 <sup>1</sup> / <sub>2</sub> /1134 <sup>1</sup> / <sub>2</sub>	3145	14 <sup>1</sup> / <sub>2</sub>
JAN7	496.60	-0.70	496.30/497.80	3	-4.80			SEP6	1119 <sup>1</sup> / <sub>2</sub>	-4	1119 <sup>1</sup> / <sub>4</sub> /1120	418	9
MAR7	501.40	-0.10	500.20/502.00	3				NOV6	1110 <sup>1</sup> / <sub>2</sub>	-6	1110 <sup>1</sup> / <sub>2</sub> /1111	6658	2 <sup>1</sup> / <sub>2</sub>
MAY7			503.30/505.10					JAN7	1107 <sup>1</sup> / <sub>2</sub>	-7	1107 <sup>1</sup> / <sub>2</sub> /1108 <sup>1</sup> / <sub>2</sub>	688	38 <sup>1</sup> / <sub>2</sub>
EUR M.WHEAT <BL2VIEW1>				Bid	Ask	Vol	Sprd	CBT SOYBEAN OIL <BOVIEW1>					
SEP6	/	/	/	/	/	/	/	JUL6	31.42	-0.13	31.41/31.43	1447	-0.14
DEC6	/	/	/	/	/	/	/	AUG6	31.55	-0.14	31.55/31.57	396	-0.14
MAR7	/	/	/	/	/	/	/	SEP6	31.70	-0.14	31.69/31.71	132	-0.12
MAY7	/	/	/	/	/	/	/	OCT6	31.87	-0.09	31.80/31.82	131	-0.28
SEP7	/	/	/	/	/	/	/	DEC6	32.09	-0.15	32.08/32.09	3871	-0.17
E TONEXT RAPESEED <O#COM:>				Bid	Ask	Vol	rd	C T SOYBEAN MEAL <SMVIEW1>					
AUG6	/	/	/	/	/	/	/	JUL6	390.2	-0.8	390.1/390.4	643	-0.7
NOV6	/	/	/	/	/	/	/	AUG6	390.9	-1.0	390.7/391.0	670	0.5
FEB7	/	/	/	/	/	/	/	SEP6	390.2	-1.6	390.2/390.4	527	1.7
MAY7	/	/	/	/	/	/	/	OCT6	388.8	-1.6	388.5/388.8	299	-0.2
AUG7	/	/	/	/	/	/	/	DEC6	388.9	-2.1	388.7/388.9	1468	3.6

KEY<COMMDO><GRAINS/1><COMMDO/FV> NB-NON PERMED EXCH DATA WILL DEFAULT TO DELAYED

When looking at the above prices, one question may come to mind. Why are the prices of the wheat futures traded on different exchanges different in price?

For wheat futures, those traded on CBOT are soft red winter wheat used for biscuits, muffins, cake and cake flour. Those traded on KCBT are hard red winter wheat which is used for bread. Trading in KCBT is less liquid than CBOT. Lastly, those traded on Minneapolis Grain Exchange are hard red spring wheat used for bread and hard baked goods.

Hence, different exchanges may trade different types of product, and thus the prices may vary as a result.

### 3. Agriculture Fundamentals Database

The Agriculture Fundamentals Database displays reports that show the supply and demand factors affecting the agriculture market. Supply and demand fundamentals correlate directly to the majority market price movements. The Agriculture Fundamental Database provides fundamental data on global agricultural commodity markets supplied by the United States Department of Agriculture (USDA) and retrieved from the World Agriculture Supply and Demand Estimates reports (WASDE).

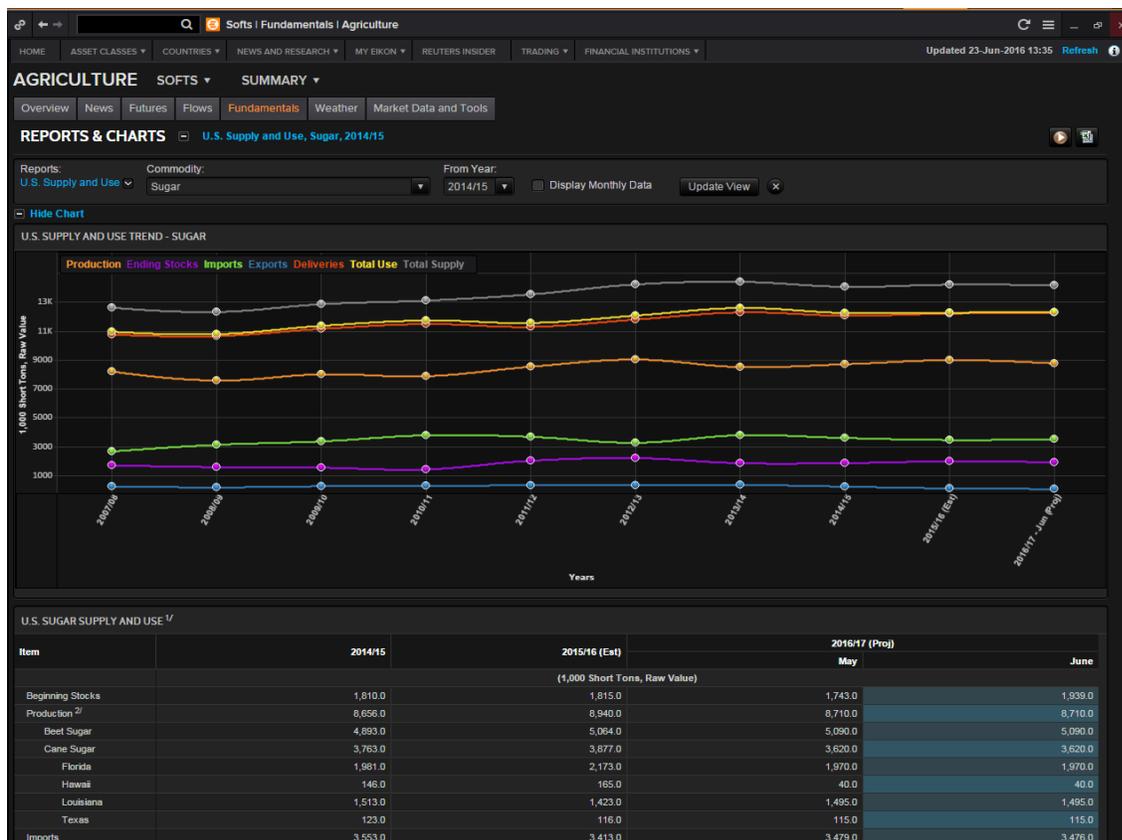
You can also view crop production data supplied by the National Agricultural Statistics Service (NASS), the Canadian Grain Commission, and U.S. oilseed statistics provided by the National Oilseed Processors Association (NOPA).

With Agriculture Fundamentals Database, you can view:

- global and US supply and usage
- US quarterly product production and prices
- Chinese import and export totals
- commercial stocks of Canadian grain etc.

To arrive at the page. You can either,

1. Type “Agriculture Fundamentals Database” in the Eikon Toolbar OR
2. Asset Classes>Commodities>Agriculture. Proceed to individual types of agriculture products and click “Fundamentals”



## 4. Research and Forecast

### Lanworth

Lanworth crop reports are a bi-weekly fundamental report that allows workflow integration with other data available in Eikon such as real-time, historical, Agriculture Fundamentals Database and shipping content. It provides early season estimates of commodity crop production worldwide. Lanworth methodology includes:

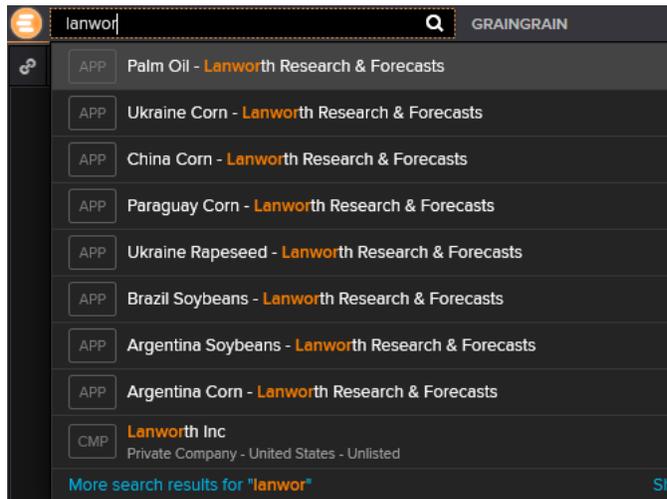
**Models** - based on farming practices, agronomic fundamentals and forward weather scenarios generating high quality first estimates of planting and production.

**Satellite imagery** - maps plantings and monitors crop development and production potential over whole countries and regions

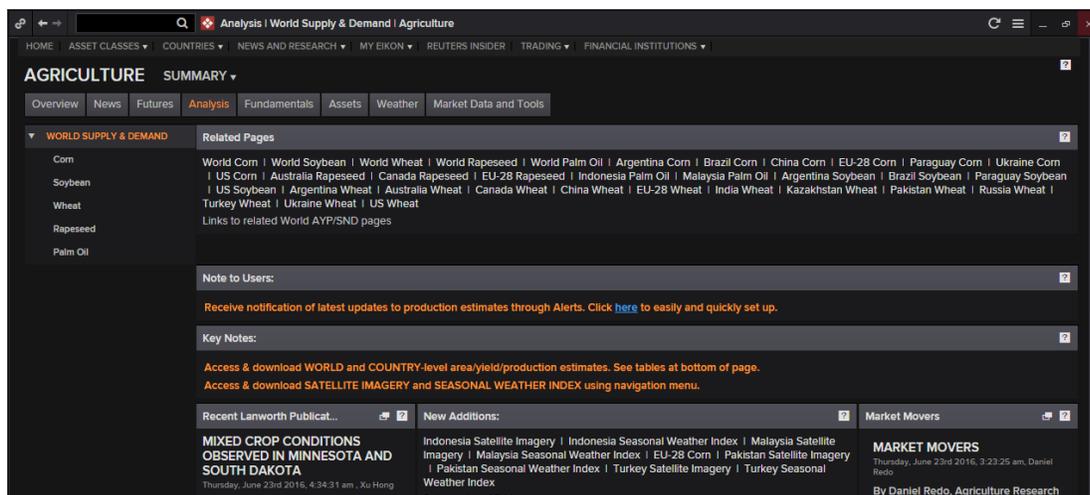
**Field investigation** - ensures the quality of model outputs and image analyses. Field teams are dispatched globally to validate forecasts.

There are two ways to obtain Lanworth research.

1. In the Eikon Toolbar, search <Lanworth> and click on the report needed.



2. Asset Classes> Commodities> Agriculture> Summary> Analysis

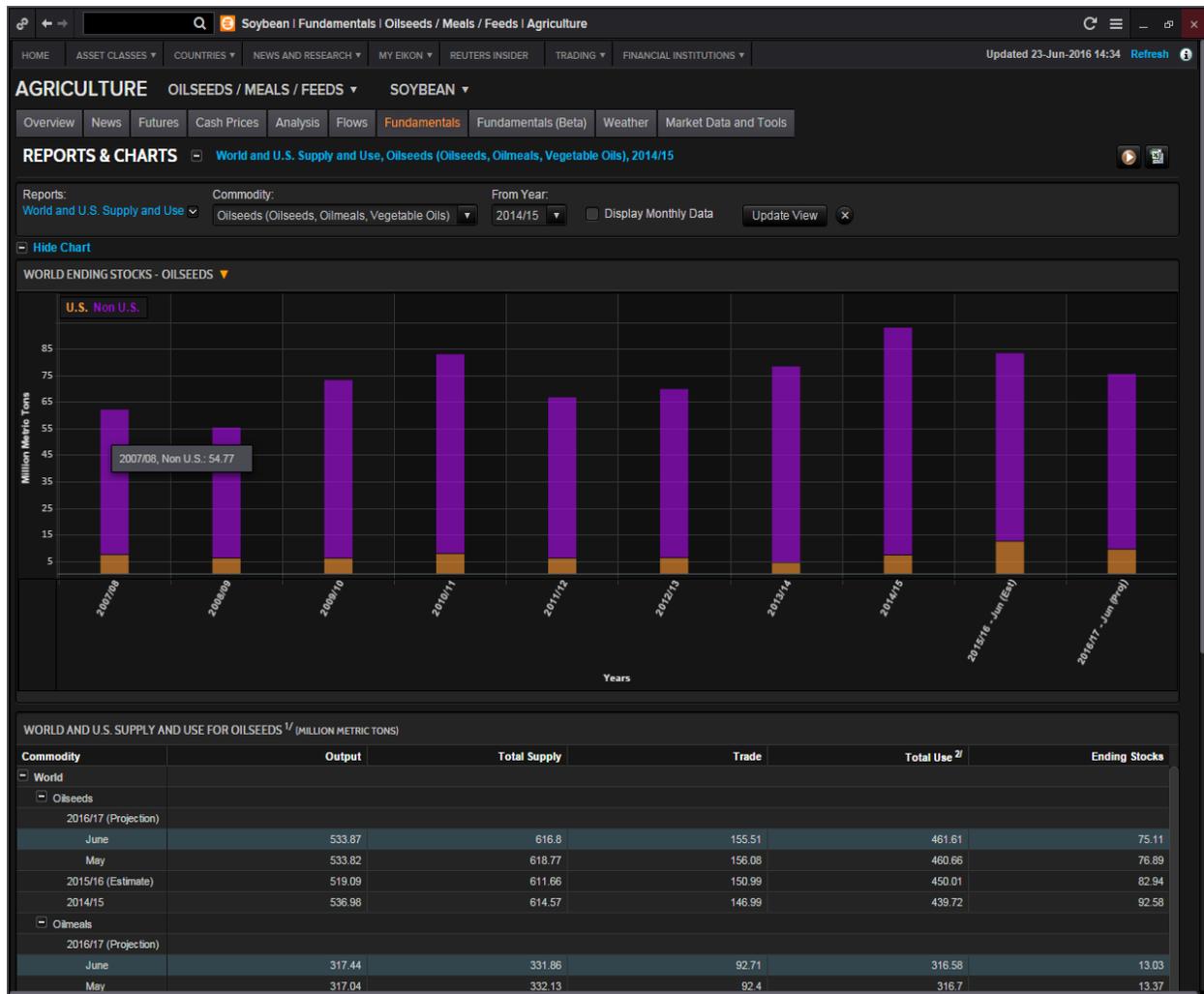


## NOPA

Thomson Reuters is the exclusive distributor of US monthly (every 15<sup>th</sup> of the month) soybean crush data from the National Oilseed Processors Association (NOPA). NOPA data is a key indicator of usage and its potential impacts on the global marketplace. NOPA provides total crushings, soya meal and soya bean oil figures for all US processing states.

The NOPA Data could be assessed by going through the following steps.

Asset Classes> Commodities> Agriculture> Oilseeds/Meals/Feeds> Fundamentals



On this page, data can be migrated to Excel. Also, NOPA Crush statistics chart is available and can be edited to display monthly/annual data, date range and category. Real time news is also available.

## 5. Weather Dashboard

The production and transport of agricultural products is heavily dependent on weather conditions. Weather extremes can have a severe impact on crop yields and in turn the supply, demand and pricing of these commodities could be heavily impacted.

To access the weather dashboard, in the Eikon Toolbar, type <Agriculture Weather>.

The screenshot displays the 'AGRICULTURE WEATHER DASHBOARD' with a navigation menu on the left and several content panels. The 'REGIONS' menu is expanded, listing areas like Australia, Eurasia, Europe, etc. The main content area includes:

- NEWS ALERTS & NEWSLETTER:** A section for receiving notifications of the latest weather insight pieces.
- NEW RELEASES:** A list of recent articles, including 'A RETURN TO THE PATH TOWARD LA NIÑA FURTHER BOOSTS FAVORABLE RAINFALL' and 'INDIA MONSOON IS POISED TO MAKE UP FOR LOST TIME'.
- ENSO UPDATE: 15 JUNE 2016:** A text-based update regarding 'Temporary hiccup underway on the long road to La Niña'.
- DAILY WEATHER HEADLINES: 22 JUNE 2016:** A list of daily weather news items, such as 'Likely derecho moves from northern Illinois to Ohio tonight'.
- WEATHER INSIGHT: RECENTLY UPDAT...:** A section for recent updates, including 'PERIODS OF HOT AND DRY WEATHER WILL CONTINUE ACROSS MUCH OF THE US'.
- WEATHER INSIGHT: UPCOMING RELEA...:** A table listing upcoming releases for various regions.
- WEEKLY SST ANOMALIES (DATA SOUR...):** A line graph showing 'Weekly Niño 3.4 Sea-Surface Temperature Anomalies' from December to June, with a 'Recent Warming' indicated.
- ENSO ANALOGS/COMPOSITE MAPS:** A map of West Africa showing precipitation anomalies, with a legend for 'Precipitation Anomalies (inches)'.
- UPCOMING CONTENT RELEASES:** A table listing expected release timeframes for various regions.

On this page, you could analyse the weather of different regions around the world as well as to check the patterns of different oscillations (e.g. El Nino, Arctic Oscillation) and its impact on crops.

## Part 6D: Shipping

## 1. Overview

Shipping is a sector which is of great importance to all commodity traders. For physical commodities traders, the price of shipping will have a large impact on their potential profit and got trading institutions; shipping is an effective way of analyzing supply and demand.

Tracking shipping prices can be done via looking at actual chartered prices or by following shipping indices. A shipping index is similar to an equity index as it provides a view of the overall trend and a historical comparison.

The Shipping Homepage is shown below. Search in the Eikon Toolbar for <FRGHT>

The screenshot shows the Eikon Shipping Overview page. At the top, there's a navigation bar with 'SHIPPING' selected. Below it, there are tabs for 'Overview', 'Dry Bulk Rates', 'Tanker Rates', 'Analysis', 'Shipping Reports', 'Equities', 'Bunker', 'Dry/Bulk Fixtures', 'Tanker Fixtures', 'Vessel Search', 'Port Search', and 'Distance Calculator'. The main content area is divided into three sections: 'LATEST NEWS AND ANALYSIS', 'SHIPPING IN CONTEXT', and 'FRGHT'. The 'SHIPPING IN CONTEXT' section contains a table of indices:

	Latest	Net	%	Date
Baltic Dry Index	585	+5	0.86%	22-Jun-2016
ICE Brent Crude	49.91	+0.03	0.06%	23-Jun-2016
Gold (LBMA)	1,267.50	+15900	0.13%	23-Jun-2016
TR/CC CRB Index	191.8087			23-Jun-2016
US 10Y T-Bond	99'11	-0'03	-0.09%	23-Jun-2016
DJ Ind. Av.	17,780.83	-48.90	-0.27%	23-Jun-2016
Euro/Dollar	1.1334	+0.0039	0.35%	23-Jun-2016

The 'FRGHT' section features a 'What's New in Shipping' alert and a list of reports including 'DRY BULKERS DAILY POSITION BY SEA-2016-06-20 (BETA)', 'TANKERS DAILY POSITION BY SEA-2016-06-20 (BETA)', 'AVERAGE SPEED BY VESSEL TYPE-2016-06-20', 'DRY BULK CONGESTION-2016-06-20', 'TANKER CONGESTION-2016-06-20', 'CONTAINERS CONGESTION-2016-06-20', 'DRY BULK WAITING TIME-2016-06-20 (BETA)', 'TANKER WAITING TIME-2016-06-20 (BETA)', and 'OIL TANKER SHIP-TO-SHIP TRANSFERS 20160617'.

The benchmark for shipping indexes is the **Baltic Dry Index**. The Baltic exchange provides both shipping indices and fixture prices. Shipping prices are also provided by Thomson Reuters journalists, and are organized according to commodity, type of vessel and route.

Below is the quote page for the Baltic Dry Index, which can be obtained by pressing F4 to open the quote app and typing <.BADI>

The screenshot shows the Eikon Quote page for the Baltic Dry Index (.BADI). The page displays the following data:

Value	Net.Chng	Pct.Chng	Volume	Turnover	News
585	+5	+0.86%			
Cls	: 580	21JUN16	Adj.Cls	:	NetIndex
Open	: 585		Cls.Pr.Yr	: 478	:
High	: 585		Yr.High	: 715	27APR16
Low	: 585		Yr.Low	: 290	10FEB16
Moves	Life.High: 11793	20MAY08	Pr.Yr.High	: 1222	TradeGP
1	Life.Low : 290	10FEB16	Pr.Yr.Low	: 471	:
Pr.Yr.Perf	: -38.87	Constituents	:	Futures	: PE
Yr.Perf	: 21.34	Weighting Chain:	:	ATM Opt	: ****

## 2. Shipping Fundamental Database

Within the Shipping Homepage <FRGHT>, there are numerous fundamentals data available such as

### 1. Fixture Data

This is a comprehensive list of vessels information, which includes, who is chartering the vessel, type of vessel, the commodity being transported, where it is and where it is going and the cost for chartering. This data is available on Eikon for Dry/Bulk and Tanker Vessels.

Such information allows customers to identify demand trends and cargo flows to gain a deeper understanding of the supply chain dynamics and explore trading. This can also be used to monitor competitor activity in the market.

### 2. Fleet Analysis

This data examines the global fleet capacity with forecasts by integrating vessel deliveries, orderbook for new vessels and expected demolitions

### 3. Port Activity

This is data regarding vessel queues, line-ups or congestions which can have a direct impact on supply. Simply click on any tab for more fundamental data available.

The screenshot displays the Thomson Reuters Shipping Fundamental Database interface. The top navigation bar includes tabs for Overview, Dry Bulk Rates, Tanker Rates, Analysis, Shipping Reports, Equities, Bunker, Dry/Bulk Fixtures, Tanker Fixtures, Vessel Search, Port Search, and Distance Calculator. The main content area is titled 'FREIGHT UPDATE' and features a 'COMMENTARY' section. The commentary includes a 'FRIDAY UPDATE - 17 JUNE 2016' by Thomson Reuters Freight Research & Forecasts, dated Friday, June 17th 2016, 9:14:03 pm, by Geoffrey Smith. The text mentions 'There are many VLCCs and Suezmaxes in the English Channel from the Waiting VLCC Suezmax report:' and includes a map of the English Channel showing vessel positions. A tooltip for '2 assets at this location' lists 'ALICE' and 'NEPTUN'. Below the map, text states 'We are now seeing thermal coal exports from Colombia to India due to the low freight rates (see the Coal Trade Flows).' and includes a world map showing trade flows.

### 3. Research and Forecast

#### TRADEFLOWS

Tradeflows is a single standard service that will assess the movement of commodities - oil, LNG, coal, iron ore, agricultural products across the globe.

##### 1. Agriculture Flows

This shows you historical cargo level detail of waterborne agriculture products imports and exports. With exclusive research and forecasts from Thomson Reuters agriculture analysts, North American Agriculture Flows will allow you to quickly understand the market and make informed and confident decisions.

Two modules are now available:

- US Bills of lading provides US historical data from US customs.
- Global Port Inspections provides coverage on 31 countries, excluding the US, both historical and future-looking

##### 2. Metal Flows

This shows you cargo-level detail of waterborne iron ore imports and exports.

##### 3. Energy Flows

This shows you cargo-level detail of waterborne crude oil, oil products, LNG and coal imports and exports.

To access the page, type <TRADEFLOWS> in the Eikon Toolbar.

---

## Part 7: Equities



# Eikon shortcuts: Equities

REAL TIME MONITORING		ANALYTICS & CALCS		COMPANY – CONTEXTUAL NAVIGATION			
				Type the company name and the selected tool – e.g. "IBM OV"			
BLOT	Blended Order Tracker	AVRG	Average Calculator	OV	Overview	GUID	Guidance Summary
BOB	Blended Order Book	CALC	Eikon Calculators	AQ	All Quotes	HS	Historical Surprise
BRKS	Broker Statistics	CONV	Convertible Bond	ARM	Analyst Revision Model	IC	Index Competitors
BTAS	Blended Time & Sales	CORR	Correlation Matrix	BAL	Balance Sheet	IIS	Interactive Income Statement
IMO	Index Movers	DARB	DR Arbitrage	BUS	Business Info.	INC	Income Statement
MON	Monitor	HRA	Historical Return Analysis	CACAL	Corporate Actions Calendar	INSIDER	Insider / Stakeholder
Q	Quote	IFFV	Index Futures Fair Value	CAPD	Capital Change Event Detail	IR	Issuer Ratings
QL	Quote List	OPR	Option Pricer	CAPO	Capital Change Overview	N	Intrinsic Valuation
QLI	Quote Line	OSC	Option Strategy	CC	Stock Competitors	MYN	My News
SDB	Sidebar	PAIRS	Pairs Calculator	CDSAQ	CDS All Quotes	OFF	Officers & Directors Overview
SI	My Synthetic Instruments	REGR	Regression Analysis	CDSCA	CDS Calculator	OFFD	Officers & Directors Detail
SNAP	Snapshot	SARB	Stock Arbitrage	CDSCHT	CDS Charts	OFFP	People Connections
TAS	Time & Sales	SIGNAL	Signal	CDSOV	CDS Overview	OFFREL	Corporate Relationships
TICK	Ticker	SRET	Total Return	CDV	Company Deals	OPM	Operating Metrics
				CF	Cash Flow	PEERS	Peers
				CHTV	Company Chart View	PMO	Price Momentum Model
				CN	Company News	PP	Price Performance
				CRS	Credit Risk – Structural Model (BETA)	PTB	Price Target Builder
				CRT	Credit Risk – Text Mining Model (BETA)	QH	Quote History
				CUST	Major Customers	RAT	Ratios – Key Metrics
				DIVD	Dividend Payment Detail	RATO	Ratios – Overview
				DIVO	Dividend Overview	RATPVR	Ratios – Profit/Value/Risk
				DS	Debt Structure	REC	Recommendations & Target Price
				EF	All Futures	RES	Company Research
				EMTO	Most Traded Options	RV	Relative Valuation
				EOP	Options	SC	Sector Competitors
				EQ	Earnings Quality	SECN	Sector News
				EST	Statement View	SEG	Segments
				ESTD	Detailed Estimates	SH	Smart Holdings Model
				EV	Events	SI	Short Interest
				EW	Warrant Overview	TASV	Time and Sales
				EXCNV	Exchangeables and CNVs	TOPA	Top Analysts
				FIL	Filings	VWAP	VWAP
				FNOWN	Fund Ownership Summary		
				FOWN	Firm Ownership Summary		
CHARTING		MARKETS					
CBOOK	Datastream Chartbook	ALPHA	Alpha Now				
CHT	Chart app	BIGTR	TR Indices				
DSCHART	Datastream Chart Studio	BIGV	Volatility Indices				
DSLIB	Datastream – My Library	EE	Economic Events				
DSNEWS	Datastream News In Charts	HOL	World Exchange Holidays				
ECOC	Economic Indicator Chart	HOME	Home page				
FESC	Fundamentals Estimates Chart	INDUS	Industry				
REBC	Rebasing Chart	INFOV	World Index Futures – Overview				
RRG	Relative Rotation Graph	INOV	World Indices – Overview				
TEAC	Technical Analysis Chart	MACROX	Macro Explorer				
VOLC	Volatility Chart	STOV	Stocks Guide				
XNET	Datastream Infobase						
		NEWS					
		NEWS	News				
		TOPNEWS	Top News				

<b>EQUITY INDEX – CONTEXTUAL NAVIGATION</b>	
Note: Type the index name and the selected tool – e.g. “IBM OV”	
CA	Constituent Analysis
CHTV	Index Chart View
EF	All Futures
EOP	Options
EV	Events
EW	Warrant Overview
FIL	Filings
IN	Index News
LJ	Leavers and Joiners
OV	Overview
PP	Index Price Performance
QH	Quote History
RES	Research
RINB	Reuters Investors Briefs

<b>SEARCHES</b>	
ADRSRCH	ADRs – Advanced Search
ANSWERS	Eikon Answers
ECONSRCH	Economic Indicators – Advanced Search
EQSRCH	Companies – Advanced Search
ETFSRCH	ETFs – Advanced Search
FUNDSRCH	Funds – Advanced Search
FUTSRCH	Futures – Advanced Search
MASRCH	Mergers and Acquisitions – Advanced Search
OPTSRCH	Options – Advanced Search
SCREENER	Equity Screener
SRCH	Advanced Search
WARRSRCH	Warrants – Advanced Search
RES	Research

<b>FUNDS – CONTEXTUAL NAVIGATION</b>	
Type the fund name or identifier and the selected tool – e.g. “QQQ AQ”	
AQ	All Quotes
CHTIP	Indexed Performance Chart
CHTNA	Total Net Assets (TNA) History Chart
CHTPD	Price & Dividend History Chart
CHTPG	Percentage Growth Chart
CHTRE	10,000 Reinvested Chart
CHTRP	Rolling Performance Chart
CHTV	Funds Chart
FHOLD	Fund Full Holdings
HOLD	Fund Holdings
OV	Overview
QA	Quantitative Analysis

<b>HELP</b>	
FAQ	Frequently Asked Questions
HELP	Online Help



# COMMONLY USED CODES: INDICES

INDICES	
CBOE Volatility Index	.VIX
Dow Jones Industrial Average	.DJI
Dow Jones Composite	.DJA
Dow Jones Transports	.DJT
Dow Jones Utilites	.DJU
Dow Jones Total Return	.DJCTR
S&P 100	.OEX
S&P 400 Midcap Equal Weighted Index	.MIDWEF
S&P 500	.SPX
S&P 600 Small Cap	.SPCY
S&P 500 CME Value Index	.IVX
S&P 500 CME Growth Index	.IGX
S&P Total Return	.SPXT
S&P 600 Consumer Discretionary Sector	.SPSMCD
S&P 500 Consumer Staples Sector	.SPLRCS
S&P 500 E-Mini Future	ESc1
S&P 500 Energy Sector	.SPNY
S&P 500 Financial Sector	.SPSY

INDICES (continued)	
S&P 500 Future	SPc1
S&P 500 Health Care Sector	.SPXHC
S&P 500 Industrials Sector	.SPLRCI
S&P 500 Information Technology Sector	.SPLRCT
S&P 500 Materials Sector	.SPLRCM
S&P 500 Telecomm Services Sector	.SPLRCL
S&P 500 Utilities Sector	.SPLRCU
Morgan Stanley Consumer Index	.CMR
Morgan Stanley Cyclical Index	.CYC
US60 Index	.US60
Nasdaq Composite	.IXIC
Nasdaq 100	.NDX
NYSE Composite	.NYA
Thomson Reuters Global Total Return	.TRXFLDGLTU
Russell Top 50	.RU50
Russell 1000	.RUI
Russell 2000	.RUT
Russell 3000	.RUA
Willshire 5000 Index	.W5000
US Dollar	.DXY

INTERNATIONAL INDICES		
FTSE 100	Great Britain	.FTSE
DAX 30	Germany	.GDAXI
CAC 40 INDEX	France	.FCHI
STOXX 50	Europe	.STOXX50
BOVESPA	Brazil	.BVSP
MXSE IPC	Mexico	.MXX
S&P TSX 60	Canada	.SPTSE
NIKKEI 225	Japan	.N225
HANG SENG INDEX	Hong Kong	.HSI
AUSTRALIA ALL ORDS	Australia	.AORD
EURO STOCKS 50	Europe	.STOXX50E
AEX Index	Netherlands	.AEX
RTS Index	Russia	.IRTS
Kospi	South Korea	.KSII
Straits Times Index	Singapore	.FTSTI

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# 1. Equity Data Pages

## Equity Homepage <EQG>

The first page that you should utilize to obtain information about equities is the Equity Homepage. On this page, you can have a brief overview of the different applications applicable to equities as well as a key list of equity indexes and top news.

To arrive at the following page,

Home > Asset Classes > Equities OR

In the Eikon Toolbar, search <EQG>

The screenshot displays the 'EQUITIES OVERVIEW' page in Eikon. It features a navigation bar with 'Overview', 'News', 'Market Data and Tools', 'Economic Events', and 'Research'. The main content is divided into several sections:

- SEARCH:** A table with categories like Indices, Futures, Warrants, ADRs and their corresponding tools (Stocks, Options, ETFs, Equity Screener).
- FEATURED CONTENT:** Links to 'What's New in Equities', 'Market Share Reporter (MSR)', 'Relative Rotation Graph (RRG)', and 'Aggregates Matrix'.
- TOP NEWS:** A list of news items with a featured article about Ping An's risks.
- TOP INDICES:** A line chart showing the performance of the N225 index from Dec-30 to May-31.
- Selected Indices (1):** A table listing various market indices with their current values and percentage changes.
- ECONOMICS TODAY:** A table of upcoming economic events.
- TOP SECTOR INDICES:** A table of sector-specific indices.

## Equity News

From the Homepage, you can easily navigate to the News and Research tab to read up on the latest news of the market of your choice.

Home > News and Research > Top News

Alternatively, you could go to the Stocks Buzz News Service to have short headlines of the main happenings.

In the Eikon Toolbar, search <Stocks Buzz>

Time	Source	RICs	Headline
10:36:19 AM	RTRS	FLT.AX	BUZZ-Australia's Flight Centre hits more than 3-yr low
10:29:46 AM	RTRS	9831.T	BUZZ-Japan's Yamada Denki soars after Goldman upgrades rating
10:26:42 AM	RTRS		BUZZ-China's steelmakers jump on Baosteel-Wuhan Steel restructuring report
09:51:43 AM	RTRS	RMD.AX QBE.AX	BUZZ-ASX 200 slipping below 4800 "not implausible" - Morgan Stanley
09:27:34 AM	RTRS	HGGH.L HGG.AX	BUZZ-UK-exposed Australian stocks open lower in Brexit aftershocks
08:39:43 AM	RTRS	TTS.AX	BUZZ-Australia's Tatts slips to more than 2-mth low, sells stake in UK slots business
08:30:57 AM	RTRS	MQG.AX	BUZZ-Australia's Macquarie hits 1-1/2-mth low on Brexit uncertainty
07:28:09 AM	RTRS	PRY.AX AGL.AX	BUZZ-Credit Suisse lowers ASX 200 year-end target on Brexit uncertainty
<b>25 June 2016</b>			
05:53:12 AM	RTRS	SKULO	BUZZ-Skullcandy soars on receiving two buyout offers in a day
04:26:10 AM	RTRS	NEM.N .XAU	BUZZ-U.S. stocks weekly: Brexit, stage left
02:43:04 AM	RTRS	ALXN.O	BUZZ-Alexion at 3-yr low on Brexit, Piper Jaffray sees chance to buy
02:11:53 AM	RTRS	XLF.P .BKX	BUZZ-European ADRs sink, on track for biggest drop since '09
01:33:23 AM	RTRS	WEN.O V.N	BUZZ-U.S. STOCKS ON THE MOVE-Brexit effect: Banks, energy down, miners up
01:00:11 AM	RTRS	FCAU.N TSLA.O	BUZZ-U.S. carmakers: Skid after Brexit vote

## 2. Equity Data Search Tools

### Advanced Search <EQSRCH>

Using the advanced search tool on Eikon for equities, one can screen out different equity instruments available, according to the different requirements they have stipulated in the filters. After filtering out the different equities, one can sort it (e.g. high to low for dividend yield) for easier search.

In the Eikon Toolbar, type <EQSRCH> and hit enter.

Double click on the name of the issuer to be directed to the company view page.

The screenshot shows the 'Equities Search' window with the following table of results:

Name (or Codes)	RIC	Currency	Market Capitalisation (USD)	Dividend Yield
Apple Inc	AAPL.O	US Dollar	511,591,495,000	2.44
Microsoft Corp	MSFT.O	US Dollar	391,687,063,434	2.89
Amazon.com Inc	AMZN.O	US Dollar	329,788,870,921	-
Facebook Inc	FB.O	US Dollar	320,583,042,793	-
Tesla Motors Inc	TSLA.O	US Dollar	28,176,975,412	-
Alphabet Inc	GOOGL.O	US Dollar	467,000,117,695	-
General Electric Co	GE	US Dollar	274,214,491,740	3.09
Bank of America Corp	BAC	US Dollar	133,534,903,489	1.54
Priceline Group Inc	PCLN.O	US Dollar	61,162,666,905	-

### Advanced Search Companies and Issuers <ORGSRCH>

This application is useful as it allows you to search for un-listed companies (i.e. private companies). From here, you can click on the different type of instruments available from the company/issuer.

In the Eikon Toolbar, search <ORGSRCH> and hit enter.

The screenshot shows the 'Companies/Issuers Search' window with the following table of results:

Company Name	Country of Domicile	TRBC Sector	RIC	Instruments Available
Wells Fargo & Co	United States	Banks (NEC)	WFC	Equities   Bonds   CDS   Warrant Ownership
Industrial and Commercial Bank of China Ltd	China (Mainland)	Banks (NEC)	601398.SS	Equities   Bonds   CDS   Warrant Ownership
JPMorgan Chase & Co	United States	Banks (NEC)	JPM	Equities   Bonds   CDS   Warrant Ownership
China Construction Bank Corp	China (Mainland)	Banks (NEC)	601939.SS	Equities   Bonds   CDS   Warrant Loans   Ownership
Agricultural Bank of China Ltd	China (Mainland)	Commercial Banks	601288.SS	Equities   Bonds   CDS   Warrant Ownership
Bank of America Corp	United States	Banks (NEC)	BAC	Equities   Bonds   CDS   Warrant Ownership
Bank of China Ltd	China (Mainland)	Banks (NEC)	601988.SS	Equities   Bonds   CDS   Warrant Loans   Ownership
HSBC Holdings PLC	United Kingdom	Commercial Banks	HSBAL	Equities   Bonds   CDS   Warrant Ownership
Citigroup Inc	United States	Banks (NEC)	C	Equities   Bonds   CDS   Warrant Ownership

## Screeener

Another application which the user could utilize to search for equities is the screener app.

Here, you can specify different fields to search for equities and export your results to Excel.

In the Eikon Toolbar, search <SCREENER> and hit enter.

Identifier	Company Name	Country of Headquarters	Company Market Cap (SGD)	P/E (Daily Time Series Ratio)	Div Per
CAEP.SI	China Merchants Holdings Pacific Ltd	Singapore	1,830,414,582.00	13.39	
KPLM.SI	Keppel Corporation Ltd	Singapore	9,742,315,012.43	7.04	
MONE.SI	M1 Ltd	Singapore	2,416,594,846.14	13.68	
SLVX.SI	Silverlake Axis Ltd	Singapore	1,322,365,954.24	9.30	
CACT.SI	CapitaLand Commercial Trust	Singapore	4,170,054,503.16	12.72	
SUNT.SI	Suntec Real Estate Investment Trust	Singapore	4,234,047,550.78	12.76	
ASRT.SI	Ascott Residence Trust	Singapore	1,826,025,017.12	10.75	
CRCT.SI	CapitaLand Retail China Trust	Singapore	1,258,326,609.89	10.63	
MAPL.SI	Mapletree Logistics Trust	Singapore	2,444,687,171.04	12.65	
MAPI.SI	Mapletree Industrial Trust	Singapore	2,968,763,068.83	10.62	
HPHT.SI	Hutchison Port Holdings Trust	Singapore	5,004,287,981.86	14.26	
OUER.SI	OUE Hospitality Trust	Singapore	1,208,163,639.08	12.33	
MAPE.SI	Mapletree Greater China Commercial ...	Singapore	2,718,107,174.62	6.22	
FRCT.SI	Fraser Centrepoint Ltd	Singapore	4,486,449,390.96	7.43	

As you can see in the leftmost column, you can specify the country of headquarters, P/E, Dividend etc. For commonly used filters, one can utilize the “Quick Filters” function. Alternatively, type in the necessary filter in the search box.

Press the button in green at the top right hand corner to export the table to Excel.

### Difference between Advanced Search and SCREENER:

Using the screener, one is able to

1. Filter more fields (such as IBES, Starmine, and Technical Analysis etc)
2. Set your own universe (portfolio) of stocks that you wish to look into
3. You can add columns to display the result with further data
4. Data can be displayed in a scatter plot format
5. The results can be exported to Excel.

These are functions not available with the EQSRCH and ORGSRCH applications.

## Eikon Answers

Using Eikon Answers, one can conduct a natural language search which can provide direct answers to your questions pertaining to equity and equity indices and its respective Technical and Fundamental ratios.

E.g. Searching for “Apple vs. Microsoft vs. Google Stock Price 2012 to 2015, EPS, Dividend” in the Eikon Toolbar would generate the following page with the corresponding visual charts.



After scrolling down past the results, you would see the following option bar.



Using these links, the Answer Application provides you with links to information or searches that it deems would aid you, thus creating an easy and quick way for you to search for correlated information without having to search for it again.

Further down the page are direct links to the company overview, futures and equity products available, as well as top news from the past day.

## Equity Offering Apps <IPO>

### IPO Process

In order to carry out an IPO, the following steps must be taken by a company.

1. Pitch: bankers from many firms will pitch themselves to become book runner roes
2. Kick-off meeting: meeting for everyone (company management, auditors, accountants, underwriting banks, lawyers etc) involved in the IPO to get together
3. The S-1 filing (For US only): SEC filing used by companies to register their securities with SEC
4. Pre-selling the offering: a pre-IPO analyst meeting
5. Roadshow: meet with investors and market the company for 1-2 weeks
6. Pricing meeting: decide on the final price of the deal based on the orders received
7. Allocation: the syndicate of banks will allocate shares to investors
8. Trading: the stock starts trading and the general public can now buy and sell shares.

### EIKON Application

On Eikon, there is an app which would list all IPOs, and here, all IPOs two weeks forwards and historical IPOs can all be accessed.

On this page, you could specify the expected date of IPO, including the exchange and country that you are interested in. Specific sectors can also be viewed.

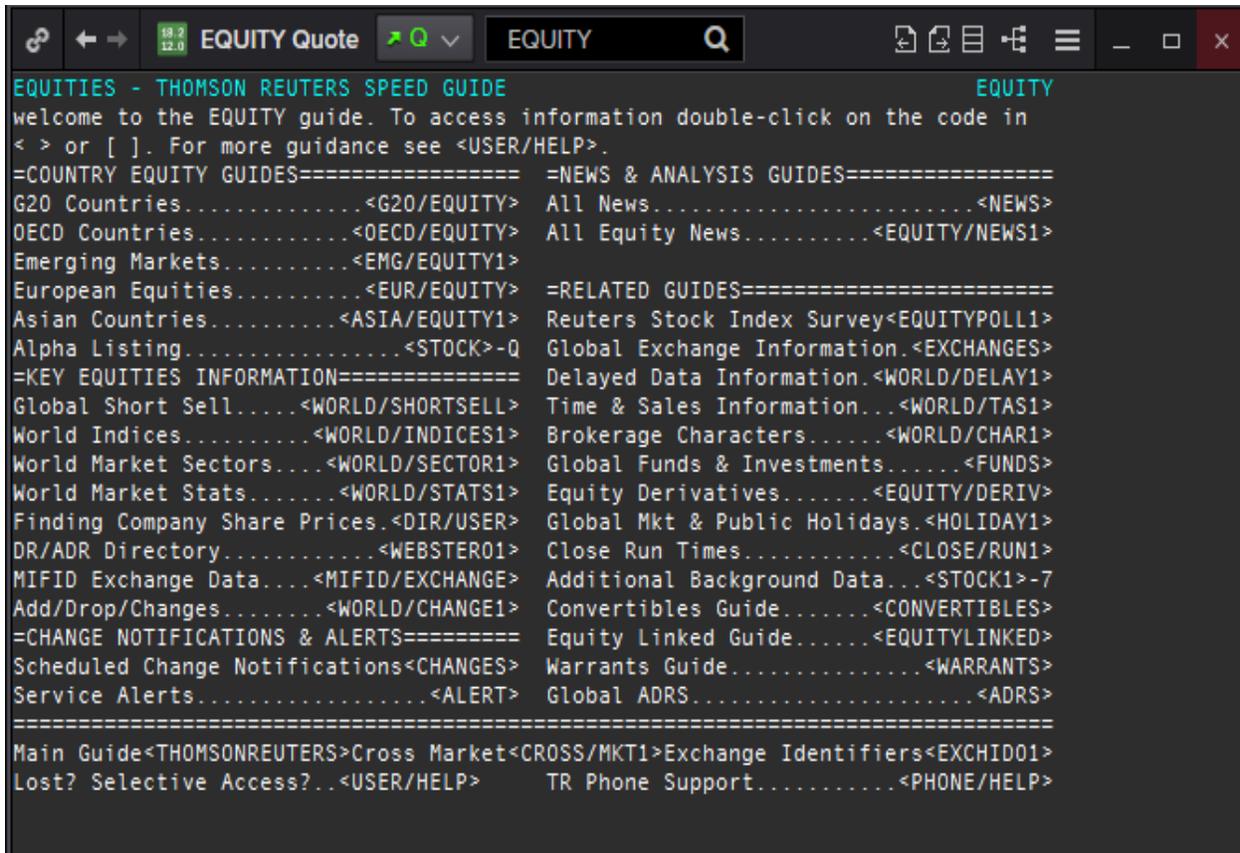
Expected Date	Issuer Name	RIC	ISIN	Issue Type	Expected Amount (USD)	Price Range	Ccy	Exchange	Country	Sector
27-Jun-2016	Gemphire Therapeutics Inc	---	---	IPO	45M	11/13	US	Nasdaq	United States	Pharmaceuticals, Medical Research
27-Jun-2016	TACTILE SYSTEMS TECHNOLOGY INC	---	---	IPO	60M	14/16	US	Nasdaq	United States	Healthcare Service
28-Jun-2016	Yongnam Holdings Ltd	YNAM.SI	SG1BA3000001	Follow-On	24.559M	0.21	SG	Singapore	Singapore	Industrial Service
29-Jun-2016	Syros Pharmaceuticals Inc	---	---	IPO	64.5M	14/16	US	Nasdaq	United States	Pharmaceuticals, Medical Research
30-Jun-2016	Teekay Offshore Partners LP	TOO.N	MHY8565J1010	Follow-On	200M	---	US	New York	Bermuda	Transportation

## Equity Speedguides

Within the Quote app, there are speedguides which provide a menu based approach to searching for data. Here, main headings would allow you to navigate to other pages which could lead to further searches.

The speedguide for equity could be accessed through the following steps.

1. Press F4 to open the quote application
2. Search <EQUITY> and the following page will appear.



```

EQUITIES - THOMSON REUTERS SPEED GUIDE
welcome to the EQUITY guide. To access information double-click on the code in
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On this page, you could be linked to the different guides related to equity instruments such as the equity instruments of G20, OECD and Emerging markets.

Occasionally, you may be faced with having to scroll through different pages as the country you are searching for <XXXX/1> to <XXXX.2>

## 3. Charting for Equities

### Basic Charting

In order to plot the basic chart of an equity's price, there are 2 ways to do so.

#### 1. Use the Chart App

Press F10 to open the Chart app. Subsequently, enter the RIC or search for the company's name in order to plot the price of the chart.



#### 2. In the Company Overview page, select “Price and Charts” for a chart representation of the equity

### Some Common Technical Analysis

There are certain technical analyses for Equities

- Simple Moving Average
- Bollinger Bands
- Volume
- Relative Performance
- Rebasing

## Pre-defined Charts in the Chart Application



Within the DataStream Chart Library application in Eikon, there are some pre-defined charts which could be useful for you when charting economic indicators as well as different types of equity instruments.

In order to access this page, you would type <DSCHART> in the Eikon Toolbar and click on the “Chartbook” tab at the top. This would lead you to the page of chart templates which you can use and modify for your usage.



## 4. Country Overview

Before investing in an equity, some investors may conduct a simple research about the Country of Exchange. In order to do so, there is a straightforward way to obtain a wholesome view of the country's financial status.

Through the country overview page, you could obtain

1. Country's Currency and Equity Index
2. Issuer Ratings
3. Key News and Events
4. Financial Markets
5. Central Bank
6. Amount of Debt
7. Key Economics
8. Comparison with other Countries
9. Key Information about Leadership in the Country

In order to open the country overview for any one country, simply search the country's name in the Eikon Toolbar. E.g. Search for "Singapore"



## 5. Company Overview

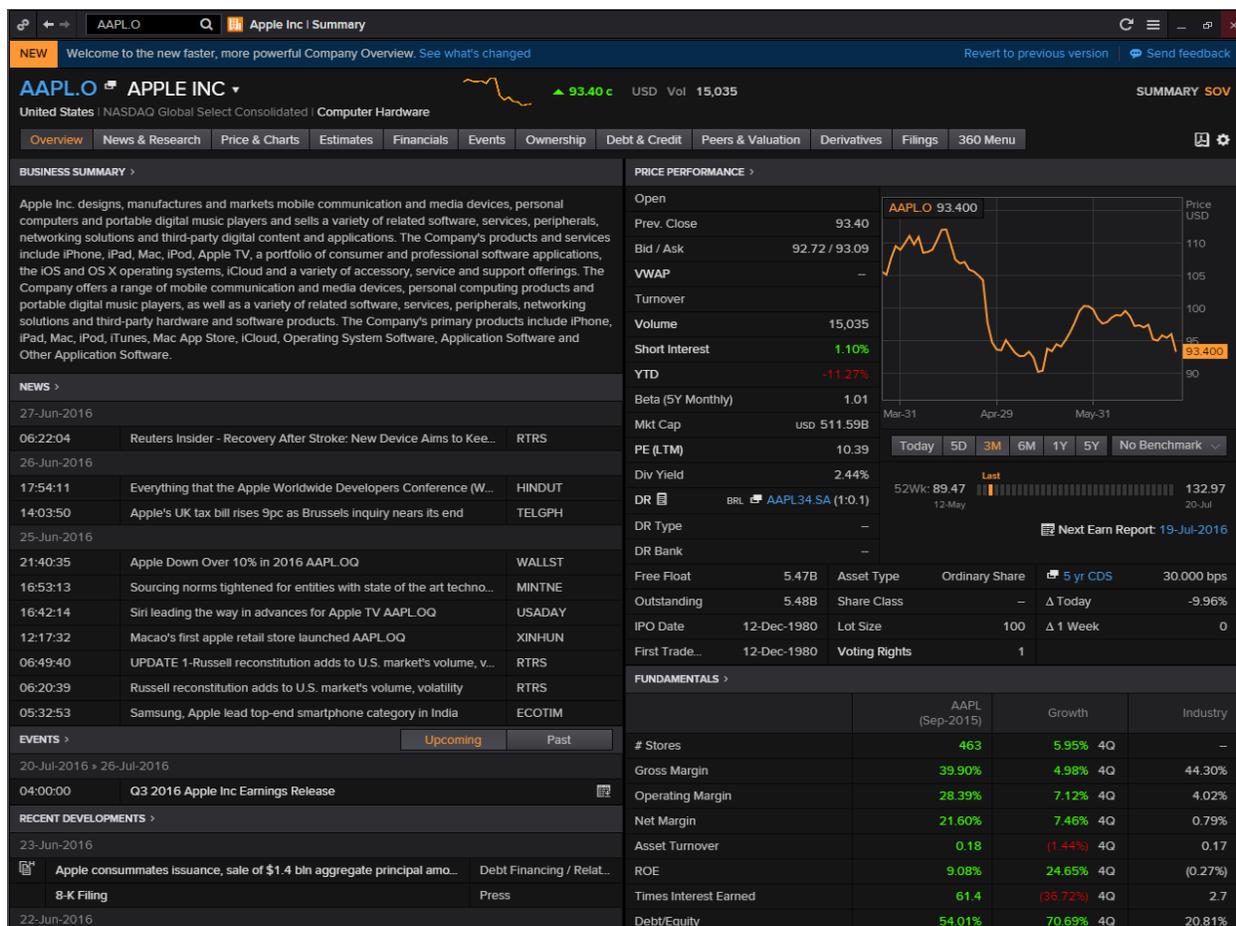
### Overview

The Company Overview page in Eikon provides access to fundamentals, estimates, research, events, significant developments and background information on companies. It gives a comprehensive overview of a stock in order for users to determine its health and the overall state of the equity instrument.

For the purpose of discussion, we have chosen to use Apple (AAPL.O) for discussion. Type the company name or ticker into the Search box and select from the Auto suggest options presented to you. (E.g. Apple or AAPL.O)

From the overview page, the following pages can be accessed,

1. Summary about the instrument
2. Stock Valuation
3. Fundamentals
4. Trading
5. Private Equity
6. Takeover Defence
7. Information about Officers



## News and Research

Within the Company Overview Page, the “News and Research” tab would provide users with a list of news from the past few days that relates to the equity you are searching on.

On the right hand column, Eikon has generated a Most Read list that would allow you to screen through the different headlines that others found important or interesting.

Within the News and Research tab, you could access the following information

1. Company News
2. My View
3. Social Media Monitor
4. Sector News
5. Reuters Investor Brief
6. Company Research

The screenshot shows the Eikon interface for AAPL.O. The top navigation bar includes 'Overview', 'News & Research', 'Price & Charts', 'Estimates', 'Financials', 'Events', 'Ownership', 'Debt & Credit', 'Peers & Valuation', 'Derivatives', 'Filings', and '360 Menu'. The 'News & Research' tab is active, displaying search results for 'Chinese (Simplified) [LZS] OR English [LEN]'. The main content area is divided into two columns: a list of news articles on the left and a 'MOST READ' section on the right. The news list includes headlines such as 'Reuters Insider - Recovery After Stroke: New Device Aims to Keep Patients Motivated' and 'Apple Down Over 10% in 2016 AAPL.OQ'. The 'MOST READ' section lists popular articles like 'Apple Down Over 10% in 2016 AAPL.OQ' and 'BUZZ-U.S. tech companies: Chips are down after Brexit'.

Going to the “My Views” tab would allow you to add specific news sections that you wish to search on based on companies, markets, business sectors, geographies etc.

Clicking on the  logo would allow you to search individual news that you wish to find, or to search news based on a specific time on a date. This would allow you to search on events or news that make have caused significant movements in stock prices at that time.

## Price and Charts

The next tab is for information about “Prices and Charts”

1. Time and Sales
2. Autex Liquidity: Indicates the market liquidity by connecting traders to those on the bid/ask side
3. Quote History
4. Price Performance
5. Price Momentum Model
6. All Quotes
7. Short Interest: Quantity of active short positions
8. VWAP: volume weighted average price
9. 10B-18: Based on SEC Rule 10B-18 which allows companies to repurchase stocks subject to conditions
10. Chart
11. Chart Studies



By clicking on the small “+” next to the frequency on the chart, you are able to add in other price series, spreads and ratios, technical analysis, economic indicators, fundamental data, estimates and mark out key events. It is similar to the F10 chart function.

## Estimates

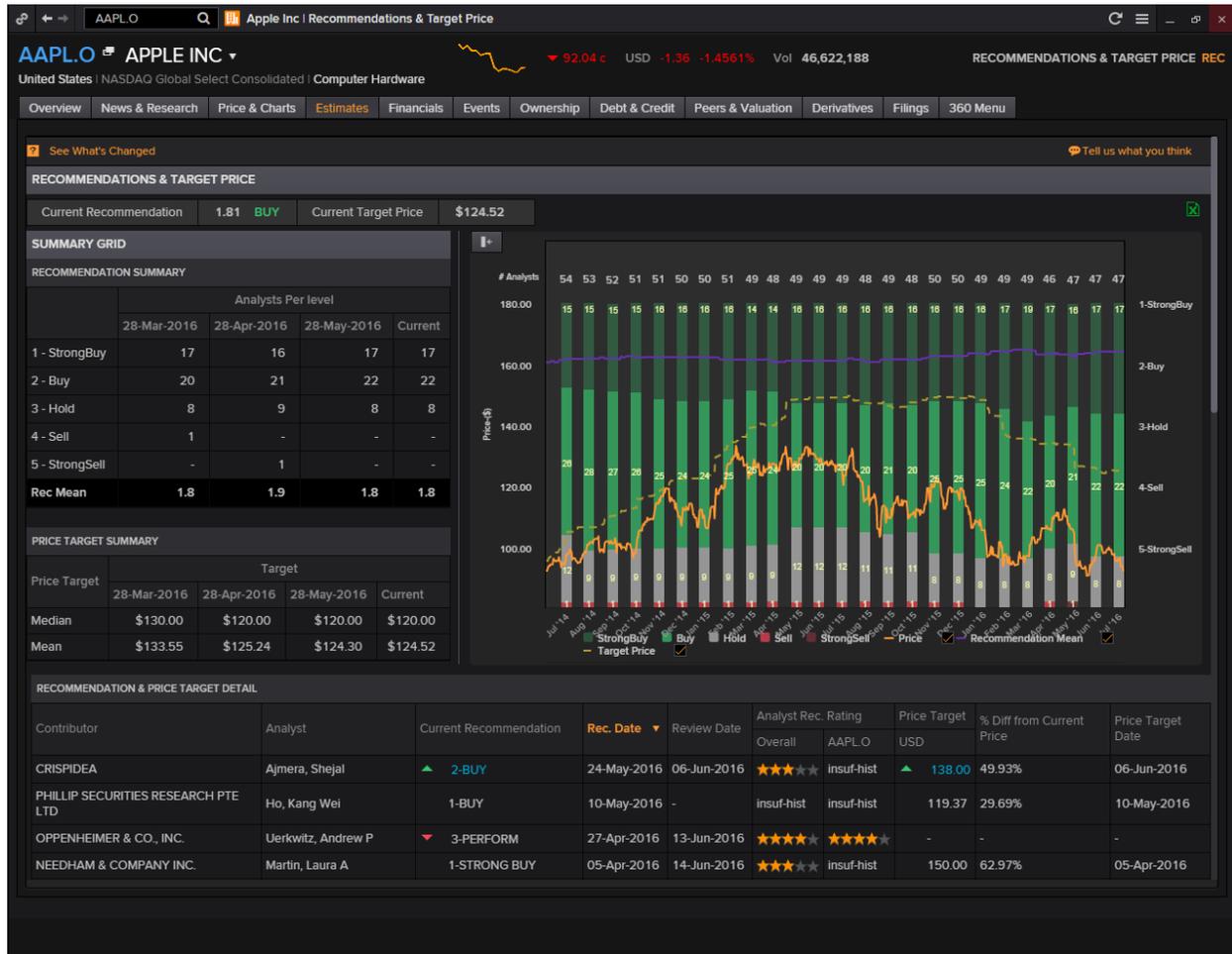
The “Estimates” tab on Eikon provides users with different estimates about a company.

1. Statement View
2. Detailed Estimates
3. Recommendations and Target Price
4. Historical Surprise
5. Guidance Summary
6. Top Analysis
7. Analyst Revisions Model
8. Interactive Income Statement

	HISTORICAL					FORECAST (MEAN)			
	FY Sep-11	FY Sep-12	FY Sep-13	FY Sep-14	FY Sep-15	FY Sep-16	FY Sep-17	FY Sep-18	FY Sep-19
<b>INCOME STATEMENT</b>									
REVENUE	108,249	156,508	170,910	182,795	233,715	216,241	226,210	237,062	223,658
Yr/Yr Growth %	66.0%	44.6%	9.2%	7.0%	27.9%	-7.5%	4.6%	4.8%	-5.7%
COST OF GOODS SOLD	-	-	-	111,808	140,089	131,604	137,916	145,445	-
Yr/Yr Growth %	-	-	-	-	25.3%	-6.1%	4.8%	5.5%	-
GROSS INCOME	-	-	64,304	70,537	93,626	85,216	89,432	95,217	84,306
Yr/Yr Growth %	-	-	-	9.7%	32.7%	-9.0%	4.9%	6.5%	-11.5%
GROSS PROFIT MARGIN	40.5%	43.9%	37.6%	38.6%	40.1%	39.2%	39.6%	39.5%	38.5%
Yr/Yr Growth	1.1%	3.4%	-6.3%	1.0%	1.5%	-0.8%	0.3%	0.0%	-1.0%
R&D EXPENSE	-	-	4,475	6,041	8,067	9,964	10,630	12,013	11,606
Yr/Yr Growth %	-	-	-	35.0%	33.5%	23.5%	6.7%	13.0%	-3.4%
SELLING & MARKETING EXPENSE	-	-	-	11,993	14,329	14,203	14,219	-	-
Yr/Yr Growth %	-	-	-	-	19.5%	-0.9%	0.1%	-	-
SG&A EXPENSE	-	-	10,830	11,993	14,329	14,318	14,620	15,809	16,423
Yr/Yr Growth %	-	-	-	10.7%	19.5%	-0.1%	2.1%	8.1%	3.9%
EBITDA	35,604	58,518	58,009	60,449	82,487	71,555	74,488	77,808	70,785
Margin%	32.9%	37.4%	33.9%	33.1%	35.3%	33.1%	32.9%	32.8%	31.6%
EBITDA PER SHARE	5.43	-	8.55	9.87	14.24	9.56	13.78	-	-
Yr/Yr Growth %	81.1%	-	-	15.4%	44.3%	-32.9%	44.2%	-	-
EBITDA REPORTED	-	-	55,756	172,707	222,576	71,685	72,387	-	-
Margin%	-	-	32.6%	94.5%	95.2%	33.2%	32.0%	-	-
DEPRECIATION	-	-	5,800	6,900	9,200	12,329	13,039	13,400	13,000
Yr/Yr Growth %	-	-	-	19.0%	33.3%	34.0%	5.8%	2.8%	-3.0%
AMORTIZATION	-	-	960.00	1,100	1,300	1,083	825.00	-	-
Yr/Yr Growth %	-	-	-	14.6%	18.2%	-16.7%	-23.8%	-	-
DEPRECIATION & AMORTIZATION	-	-	6,757	7,946	11,257	11,796	12,468	13,670	-
Yr/Yr Growth %	-	-	-	17.6%	41.7%	4.8%	5.7%	9.6%	-
EBIT	33,790	55,241	48,999	52,503	71,230	60,410	63,128	66,375	56,277

From the Statement Views page, you can get historical data for the past 5 years and it may feature data for the next three years as well.

Under the Recommendations page, you can find the analyst’s recommendations for the company. From here, you can consider their suggestions when deciding on your trade.



The research team in Eikon contacts analysts to ask them about their opinion about a stock, subsequently, they would assign a number (1: Strong buy to 5: Strong sell) to their recommendations, and subsequently find the average which would stand for their recommendation on whether to buy or sell the stock.

For example, here, analysts in general believe you should buy into Apple.

## Financials

The “Financials” page is good for users who is interested about the Fundamentals of the company. From here, the following information is available.

1. Financial Statements (Income Statement, Balance Sheet and Cash Flow)
2. Operating Metrics
3. Segments
4. Major Customers
5. Ratios - Key Metrics
6. Ratios - Overview
7. Ratios - Profit/Value/Risk
8. Earnings Quality

	2015	2014	2013	2012	2011
<b>Earnings Quality Score</b>	91	90	90	67	67
Period End Date	26-Sep-2015	27-Sep-2014	28-Sep-2013	29-Sep-2012	24-Sep-2011
Revenue	233,715	182,795	170,910	156,508	108,249
Other Revenue, Total	--	--	--	--	--
<b>Total Revenue</b>	<b>233,715</b>	<b>182,795</b>	<b>170,910</b>	<b>156,508</b>	<b>108,249</b>
Cost of Revenue, Total	140,089	112,258	106,606	87,846	64,431
<b>Gross Profit</b>	<b>93,626</b>	<b>70,537</b>	<b>64,304</b>	<b>68,662</b>	<b>43,818</b>
Selling/General/Admin. Expenses, Total	14,329	11,993	10,830	10,040	7,599
Research & Development	8,067	6,041	4,475	3,381	2,429
Depreciation/Amortization	--	--	--	--	--
Interest Expense, Net - Operating	--	--	--	--	--
Interest/Investment Income - Operating	--	--	--	--	--
Interest Expense(Income) - Net Operating	--	--	--	--	--
Interest Exp.(Inc.)Net-Operating, Total	--	--	--	--	--
Unusual Expense (Income)	--	--	--	--	--
Other Operating Expenses, Total	--	--	--	--	--
<b>Total Operating Expense</b>	<b>162,485</b>	<b>130,292</b>	<b>121,911</b>	<b>101,267</b>	<b>74,459</b>
<b>Operating Income</b>	<b>71,230</b>	<b>52,503</b>	<b>48,999</b>	<b>55,241</b>	<b>33,790</b>
Interest Expense, Net Non-Operating	(733)	(384)	(136)	--	--
Interest/Invest Income - Non-Operating	2,921	1,675	1,316	1,088	519
Interest Income(Exp.), Net Non-Operating	--	--	--	--	--
Interest Inc.(Exp.)Net-Non-Op., Total	2,188	1,291	1,180	1,088	519
Gain (Loss) on Sale of Assets	--	--	--	--	--
Other, Net	(903)	(311)	(24)	(566)	(104)
<b>Net Income Before Taxes</b>	<b>72,515</b>	<b>53,483</b>	<b>50,155</b>	<b>55,763</b>	<b>34,205</b>
Provision for Income Taxes	19,121	13,973	13,118	14,030	8,283
<b>Net Income After Taxes</b>	<b>53,394</b>	<b>39,510</b>	<b>37,037</b>	<b>41,733</b>	<b>25,922</b>
Minority Interest	--	--	--	--	--
Equity In Affiliates	--	--	--	--	--
U.S. GAAP Adjustment	--	--	--	--	--
<b>Net Income Before Extra. Items</b>	<b>53,394</b>	<b>39,510</b>	<b>37,037</b>	<b>41,733</b>	<b>25,922</b>

On the Ratios - Overview, you can find all kinds of ratios relating to information extracted from the accounting statements.

Segments would provide you the information about the different business segments of the company and the respective revenue for each segments. Note that different segments may belong to different industries.

## Events

The “Events” page is useful for users to monitor the occurrence of certain events that may impact the price of the equity. These events include, corporate announcements, or dividend related dates. Information available include:

1. Corporate Events
2. Company Deals
3. Corporate Actions Calendar
4. Capital Change Overview
5. Capital Change Event Detail
6. Dividend Overview
7. Dividend Payment Detail

The screenshot displays the 'Events' page for Apple Inc. (AAPLO). The page header shows the stock price at 93.40 USD and volume at 15,035. The navigation bar includes tabs for Overview, News & Research, Price & Charts, Estimates, Financials, Events, Ownership, Debt & Credit, Peers & Valuation, Derivatives, Filings, and 360 Menu. The main content area is titled 'EVENTS' and includes filters for 'Last 1 Year & Next 1 Year', 'Event Types (All)', and 'Content Type (All)'. It displays three sections: 'TODAY'S EVENTS (0)', 'UPCOMING EVENTS (2)', and 'PAST EVENTS (17)'. The 'UPCOMING EVENTS' table shows two events: 'Q3 2016 Apple Inc Earnings Release' and 'Apple Inc Annual Shareholders Meeting'. The 'PAST EVENTS' table lists 17 events, including various dividends and earnings releases from 2015 to 2016.

Date/Time	Type	RIC	Event Name	Content	Add
20-Jul-2016	AMC	AAPLO	Q3 2016 Apple Inc Earnings Release		
25-Feb-2017		AAPLO	Apple Inc Annual Shareholders Meeting		
Displaying 1 - 2 of 2 records					
PAST EVENTS (17)					
Date/Time	Type	RIC	Event Name	Content	Add
05-May-2016	NTS	AAPLO	Dividend For AAPL4.BA - 0.0570 USD		
05-May-2016	NTS	AAPLO	Dividend For AAPL - 0.5700 USD		
27-Apr-2016	AMC	AAPLO	Q2 2016 Apple Inc Earnings Release		
27-Apr-2016	05:00	AAPLO	Q2 2016 Apple Inc Earnings Call		
27-Feb-2016	01:00	AAPLO	Apple Inc Annual Shareholders Meeting		
04-Feb-2016	NTS	AAPLO	Dividend For AAPL4.BA - 0.0520 USD		
04-Feb-2016	NTS	AAPLO	Dividend For AAPL - 0.5200 USD		
27-Jan-2016	AMC	AAPLO	Q1 2016 Apple Inc Earnings Release		
27-Jan-2016	06:00	AAPLO	Q1 2016 Apple Inc Earnings Call		
05-Nov-2015	NTS	AAPLO	Dividend For AAPL4.BA - 0.0520 USD		
05-Nov-2015	NTS	AAPLO	Dividend For AAPL - 0.5200 USD		
28-Oct-2015	AMC	AAPLO	Q4 2015 Apple Inc Earnings Release		
28-Oct-2015	05:00	AAPLO	Q4 2015 Apple Inc Earnings Call		
06-Aug-2015	NTS	AAPLO	Dividend For AAPL4.BA - 0.0520 USD		
06-Aug-2015	NTS	AAPLO	Dividend For AAPL - 0.5200 USD		
22-Jul-2015	AMC	AAPLO	Q3 2015 Apple Inc Earnings Release		
22-Jul-2015	05:00	AAPLO	Q3 2015 Apple Inc Earnings Call		
Displaying 1 - 17 of 17 records					

## Ownership

Ownership data shows a company’s shareholder list, sometimes it reflects the company’s economy and governmental background.

1. Ownership Summary
2. Shareholders Report
3. Shareholders History Report
4. Fund Ownership Summary
5. Fund Shareholders Report and History Report
6. Insider/Stakeholder
7. Smart Holdings Model
8. Equity Holdings
9. Private Equity Holdings

**OWNERSHIP SUMMARY**

Primary Exchange: NO MARKET (EG, UNLISTED) | Free Float: 5,474,052,371 | Free Float %: 99.94% | Shares Outstanding: 5,477,425,000 | Strategic Entities Ownership %: 0.06% | Market Capitalization (M USD): 511,591.50

TOP INVESTORS (AS OF LATEST FILING)				View All	RECENT ACTIVITY			
1	The Vanguard Group, Inc.	6.02%	329.99M shares	31-Mar-2016	+7.02M shares	LOW	Turnover:	BUY
2	BlackRock Institutional Trust Company, N.A.	3.96%	217.10M shares	31-Mar-2016	-1.94M shares	LOW	Turnover:	SELL
3	State Street Global Advisors (US)	3.94%	215.64M shares	31-Mar-2016	-1.81M shares	LOW	Turnover:	
4	Fidelity Management & Research Company	2.54%	139.35M shares	31-Mar-2016	-11.38M shares	LOW	Turnover:	
5	T. Rowe Price Associates, Inc.	0.94%	51.26M shares	31-Mar-2016	+0.96M shares	LOW	Turnover:	
6	Geode Capital Management, L.L.C.	0.88%	48.17M shares	31-Mar-2016	+1.46M shares	LOW	Turnover:	
7	Norges Bank Investment Management (NBIM)	0.88%	48.15M shares	31-Dec-2015	+0.77M shares	LOW	Turnover:	
8	TIAA Global Asset Management	0.85%	46.83M shares	31-Mar-2016	+0.82M shares	LOW	Turnover:	
9	Northern Trust Investments, Inc.	0.81%	44.28M shares	31-Mar-2016	+0.13M shares	LOW	Turnover:	
10	Invesco PowerShares Capital Management LLC	0.79%	43.26M shares	31-Mar-2016	-4.19M shares	LOW	Turnover:	

BREAKDOWN (AS OF LATEST FILING)				
Type	Style	Location	Rotation	Turnover
INSTITUTIONS				
Investment Managers			3,153	53.58%
Brokerage Firms			49	3.15%
STRATEGIC ENTITIES				
Corporation			1	0%
Holding Company			2	0%
Individual Investor			17	0.05%
Government Agency			N/A	N/A

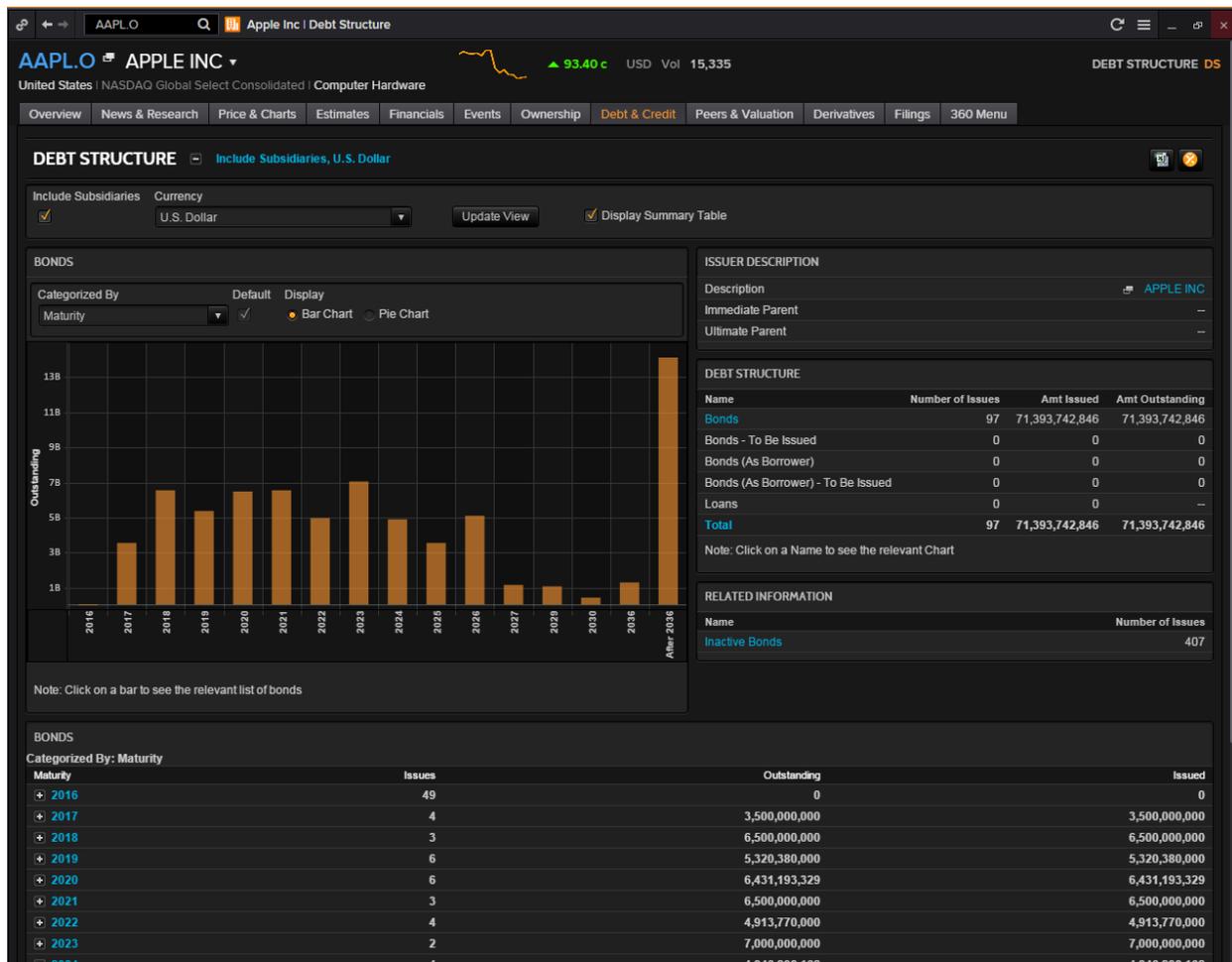
Hovering over any name in the list of investors would cause this icon to pop up.

Pressing on this button would allow you to generate a visual overview of the historical holdings of this stock by this specific investor. Also, the top 10 Holdings of the company would be displayed in the form of a pie chart.

## Debt and Credit

As the name suggests, this page allows users to have a more in-depth view on the debt structure of the company as well as its credit risk. The list of Credit Default swaps available for the company can also be found.

1. Debt Structure
2. Issuer Curve and Ratings
3. Exchangeables and CNVs
4. CDS Overview
5. CDS All Quotes
6. CDS Charts
7. CDS Calculator
8. Combined Credit Risk
9. Text Mining Credit Risk
10. Structural Credit Risk
11. Smart Ratios Credit Risk



## Peer and Valuation

One good way to analyse a company other than through fundamental analysis is to do peer comparison with other similar stocks in the market.

1. Peer Analysis
2. Sector Competitors
3. Index Competitors
4. Stock Comparison
5. Value Chains
6. Relative Valuation Model
7. Relative Valuation
8. Intrinsic Valuation
9. Value momentum
10. Price Target Builder
11. Combined Alpha Model

**PEER ANALYSIS FOR APPLE INC (AAPL.O)**

Identifier	Company Name	EV / Revenue (SmartEstimate <sup>®</sup> ) (NTM, Consolidated)	EV / EBITDA (SmartEstimate <sup>®</sup> ) (NTM, Consolidated)	Price / EPS (SmartEstimate <sup>®</sup> ) (NTM, Consolidated)	Price / Cash Flow Per Share (SmartEstimate <sup>®</sup> ) (ntm, Consolidated)	Price / Book Value Per Share (SmartEstimate <sup>®</sup> ) (ntm, Consolidated)	Price / Sales Ratio - SmartEstimate <sup>®</sup> (NTM, Consolidated)	Dividend Per Share Yr % (SmartEstimate <sup>®</sup> ) (NTM, Consolidated)
AAPL.O	Apple Inc	2.40	7.25	10.56	7.58	3.69	2.3%	2
HPQ.N	HP Inc	0.50	5.57	7.54	7.01	NA	0.5%	4
IBM.N	International Business Machines Corp	2.16	8.68	10.64	8.96	8.02	1.8%	3
CSCO.OQ	Cisco Systems Inc	2.08	6.24	11.37	10.00	2.06	NA	3
MSI.N	Motorola Solutions Inc	2.36	8.75	13.53	8.72	NA	2.2%	2
MSFT.OQ	Microsoft Corp	3.50	9.24	17.25	12.49	5.05	NA	3
005930.KS	Samsung Electronics Co Ltd	0.80	3.26	9.52	4.94	1.09	NA	1
NOKIA.HE	Nokia Corp	0.93	7.44	18.89	19.01	155	0.8%	3

As shown in the screenshot above of the peer analysis for Apple, a list of similar equity instruments and their respective data will be displayed in data form.

Should you have a preferred list of peers, you could always click the “Edit Peers” button in blue to choose your own comp set. Alternatively, you could type the name or RIC of the equity in the “Add Security” option offered at the bottom of the page.

## Derivatives

There are a few equity derivatives that are tradable, but people generally purchase options and futures on equities.

Thus, in Eikon, we have provided a list of the most traded options for your perusal. Similarly, a more detailed list of futures and warrants available.

1. Most Traded Options
2. Options
3. All Futures
4. Warrant Overview

Name	Display RIC	Underlying	Exchange	Last	Bid	Ask	Net Chg	Close	Vol Today	Open Int.	Vol v Open Int.
AAPL 1J16 90.0 P		AAPLO	OPQ					0.36		4,324	
AAPL 1J16 88.5 P		AAPLO	OPQ					0.27		501	
AAPL 1J16 89.0 P		AAPLO	OPQ					0.25		825	
AAPL 1J16 89.5 P		AAPLO	OPQ					0.29		1,149	
AAPL 1J16 90.5 P		AAPLO	OPQ					0.48		1,113	
AAPL Jul16 92.5 P		AAPLO	OPQ					1.60		19,495	
AAPL 1J16 88.0 P		AAPLO	OPQ					0.18		858	
AAPL 1J16 88.5 C		AAPLO	OPQ					8.91		17	
AAPL 1J16 89.5 C		AAPLO	OPQ					11.02		13	
AAPL 1J16 89.0 C		AAPLO	OPQ					5.10		53	
AAPL 1J16 91.0 P		AAPLO	OPQ					0.52		3,710	
AAPL 1J16 90.0 C		AAPLO	OPQ					4.05		492	
AAPL Jul16 100.0P		AAPLO	OPQ					6.65		29,087	
AAPL 1J16 88.0 C		AAPLO	OPQ					5.50		60	
AAPL 1J16 91.5 P		AAPLO	OPQ					0.63		1,404	
AAPL 1J16 90.5 C		AAPLO	OPQ					3.24		213	
AAPL Jul16 100.0C		AAPLO	OPQ					0.17		65,454	
AAPL 1J16 92.0 P		AAPLO	OPQ					0.76		1,727	
AAPL 1J16 100.0P		AAPLO	OPQ					6.60		23,760	
AAPL Jul16 97.5 P		AAPLO	OPQ					4.49		30,495	
AAPL Jul16 97.5 C		AAPLO	OPQ					0.52		25,025	
AAPL Jul16 90.0 P		AAPLO	OPQ					0.87		34,569	
AAPL 1J16 91.5 C		AAPLO	OPQ					2.58		299	
AAPL Jul16 95.0 C		AAPLO	OPQ					1.35		51,697	
AAPL 1J16 92.5 P		AAPLO	OPQ					0.97		1,725	
AAPL 1J16 92.0 C		AAPLO	OPQ					2.23		812	
AAPL 1J16 100.0C		AAPLO	OPQ					0.02		22,807	
AAPL 1J16 95.0 P		AAPLO	OPQ					2.20		5,496	
AAPL 1J16 93.0 P		AAPLO	OPQ					1.10		8,087	
AAPL 1J16 94.0 P		AAPLO	OPQ					1.56		3,374	
AAPL 1J16 92.5 C		AAPLO	OPQ					1.88		544	
AAPL Jul16 105.0C		AAPLO	OPQ					0.03		52,367	
AAPL Jul16 105.0P		AAPLO	OPQ					11.65		20,751	

While you may heard of options and futures, warrants is also a type of derivative available on the market.

Similar to options, a warrant confers a right for you to buy and sell an instrument. This may prompt you to categorise options and warrants as the same thing. However, there are a few key differences. Warrants are usually issued by the company and are traded OTC more than in an exchange. When an investor exercises their warrant, they are issued a newly issued stock instead of an outstanding one. Lastly, the expiry of a warrant is much longer than an option and often come in tenors lastly up to a few years rather than just a few months.

## Filings

The “Filings” tab is just a one stop place for you to refer to recent company filings by the company such as their Form 8-K etc.

The screenshot displays the 'Filings' section for Apple Inc. (AAPLO). The main area shows a table of 28 filings. The table has the following columns: Filing Date, Document Date, Company Name, and Format. The filings listed are as follows:

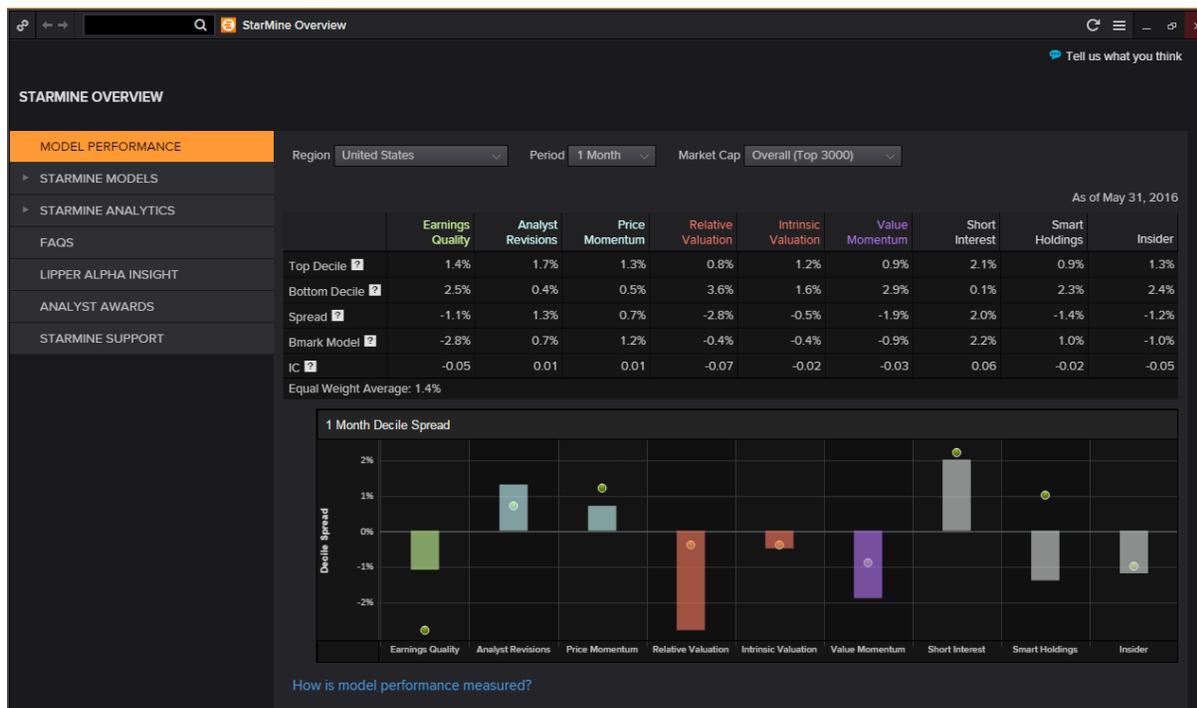
Filing Date	Document Date	Company Name	Format
06/23/2016	06/07/2016	Apple Inc	PDF
06/18/2016	06/10/2016	Apple Inc	PDF
06/17/2016	06/14/2016	Apple Inc	PDF
06/15/2016	06/10/2016	Apple Inc	PDF
06/09/2016	06/03/2016	Apple Inc	PDF
06/09/2016	06/03/2016	Apple Inc	PDF
06/09/2016	06/08/2016	Apple Inc	PDF
06/08/2016	06/03/2016	Apple Inc	PDF
06/08/2016	06/03/2016	Apple Inc	PDF
06/08/2016	06/07/2016	Apple Inc	PDF
06/07/2016	06/07/2016	Apple Inc	PDF
06/03/2016	05/31/2016	Apple Inc	PDF
06/02/2016	05/31/2016	Apple Inc	PDF
06/02/2016	06/02/2016	Apple Inc	PDF
06/02/2016	06/02/2016	Apple Inc	PDF
06/02/2016	06/02/2016	Apple Inc	PDF
06/02/2016	04/05/2016	Apple Inc	PDF
06/02/2016	06/02/2016	Apple Inc	PDF
06/02/2016	04/22/2016	Apple Inc	PDF
06/02/2016	06/02/2016	Apple Inc	PDF
06/02/2016	06/02/2016	Apple Inc	PDF
06/02/2016	06/02/2016	Apple Inc	PDF
06/02/2016	05/27/2016	Apple Inc	PDF
06/02/2016	05/29/2016	Apple Inc	PDF

The interface also includes a sidebar with filters: Filing Date (30 Days), Keywords, Delta Reports, and Category. The top navigation bar shows various tabs including Overview, News & Research, Price & Charts, Estimates, Financials, Events, Ownership, Debt & Credit, Peers & Valuation, Derivatives, Filings, and 360 Menu. The top of the page displays the stock price for AAPLO as 93.40 c USD with a volume of 15,335.

## 6. STARMINE Models

### Overview

STARMINE models provide quantitative modelling and derived outputs, with unique value-add analytics and predictive financial modelling that help you make investment decisions.



In the Eikon Toolbar, enter <STARMINE> and hit enter in order to pull up the above page. From this page, you are able to view the overall model performance of STARMINE's predictions so far.

STARMINE uses two measures of stock selection. Firstly, a decile spread is used to analyse the model scores on the last trading day of the month and create two equally weighted portfolio based on these score. They then hold these stocks until the end of the holding period and they subsequently rebalance, ignoring transaction trends. They also utilise a global score in order to evaluate global performance, a region=relative score to examine performance in a region.

In this manual, we will briefly look at the following models.

1. Price Momentum Model
2. Analyst Revision Model
3. Earnings Quality
4. Relative Valuation
5. Intrinsic Valuation
6. Value Momentum
7. Credit Risk - Combined Model

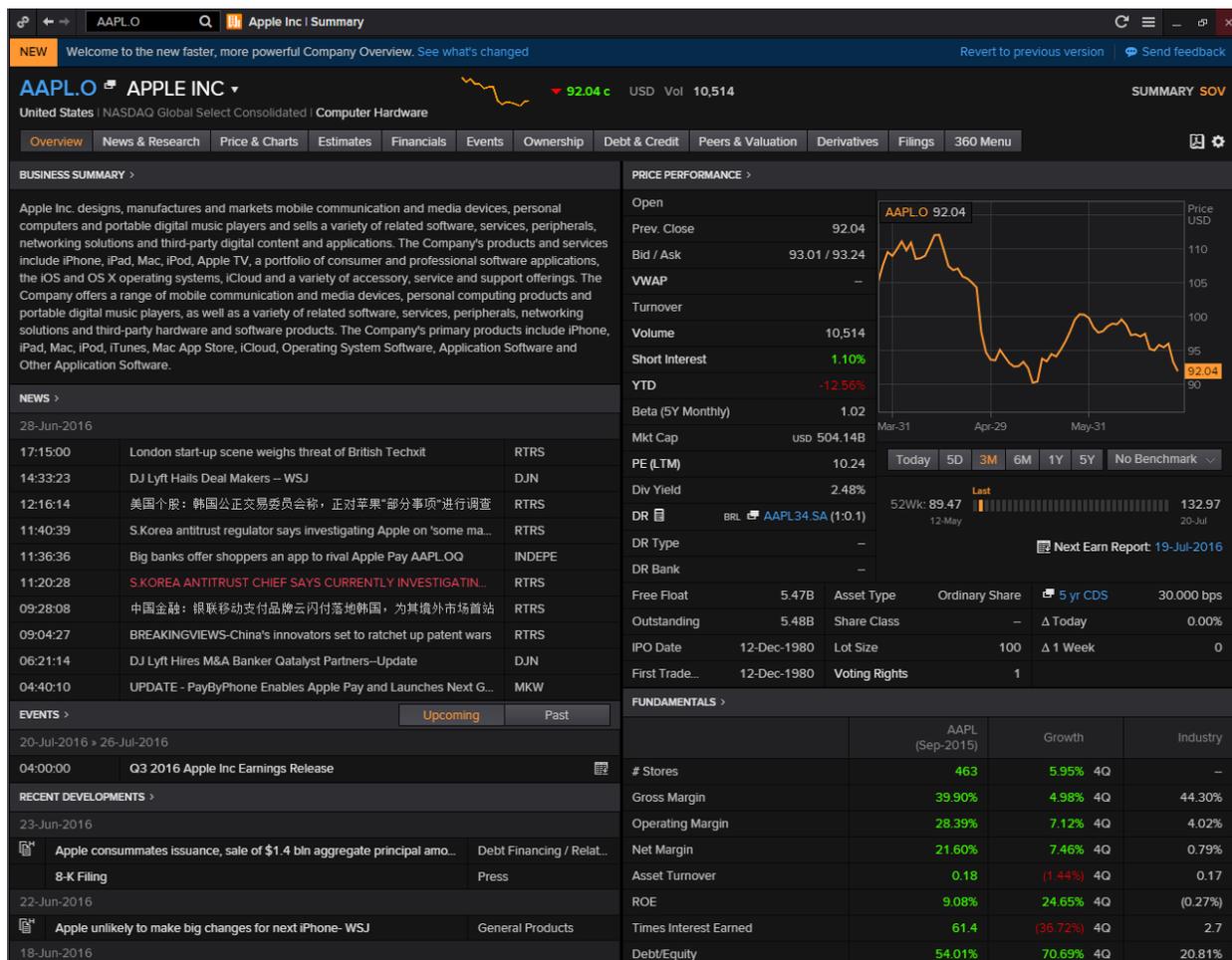
For every model covered, a detailed description would be provided, followed by an explanation and demonstration using Apple's equity.

## How to Use StarMine Models?

In order to obtain results for any of the StarMine models, one should first navigate to the home page of the focus company (equity instrument first).

For example, we are searching for the StarMine models for the Apple Equity (AAPL.O).

1. In the Eikon Toolbar, search for the equity instrument you wish to view. (e.g. AAPL.O)



Here is where to find each model to be discussed:

1. Price Momentum Model - Prices and Charts
2. Analyst Revision Model - Estimates
3. Earnings Quality - Financials
4. Relative Valuation - Peers and Valuation
5. Intrinsic Valuation - Peers and Valuation
6. Value Momentum - Peers and Valuation
7. Credit Risk - Combined Model - Debt and Credit

## Price Momentum Model

### Overview

StarMine's Price Momentum Model is a percentile ranking of stocks based on recent historical price performance. The stock ranking scores are on a scale from one to a hundred (1-100). The model is highly predictive of relative price movement and is effective across stocks in each category, investment style, and market sector.

### Long Term Component

The Long Term component exploits the tendency of stocks with strong performance over the past 6-12 months to continue to outperform going forward.

It compares the average daily closing price over the last six months to that over the last 12 months, rewarding stocks whose prices have increased over the last year.

This component is normalized by the trailing 12-month volatility, as measured by the standard deviation of the last 12 monthly price changes. This adjustment amplifies scores for stocks whose price changes were achieved in steady moves and moderates scores for those whose changes were inconsistent or the result of sharp jumps.

### Mid Term Component

The Mid Term component compares the average daily closing price over the last ten trading days to that over the last three months, rewarding stocks whose 10-day average is greater than their 3-month average.

The Mid Term component is normalized by volatility, using an exponentially weighted moving average of daily returns over the last year.

### Short Term Component

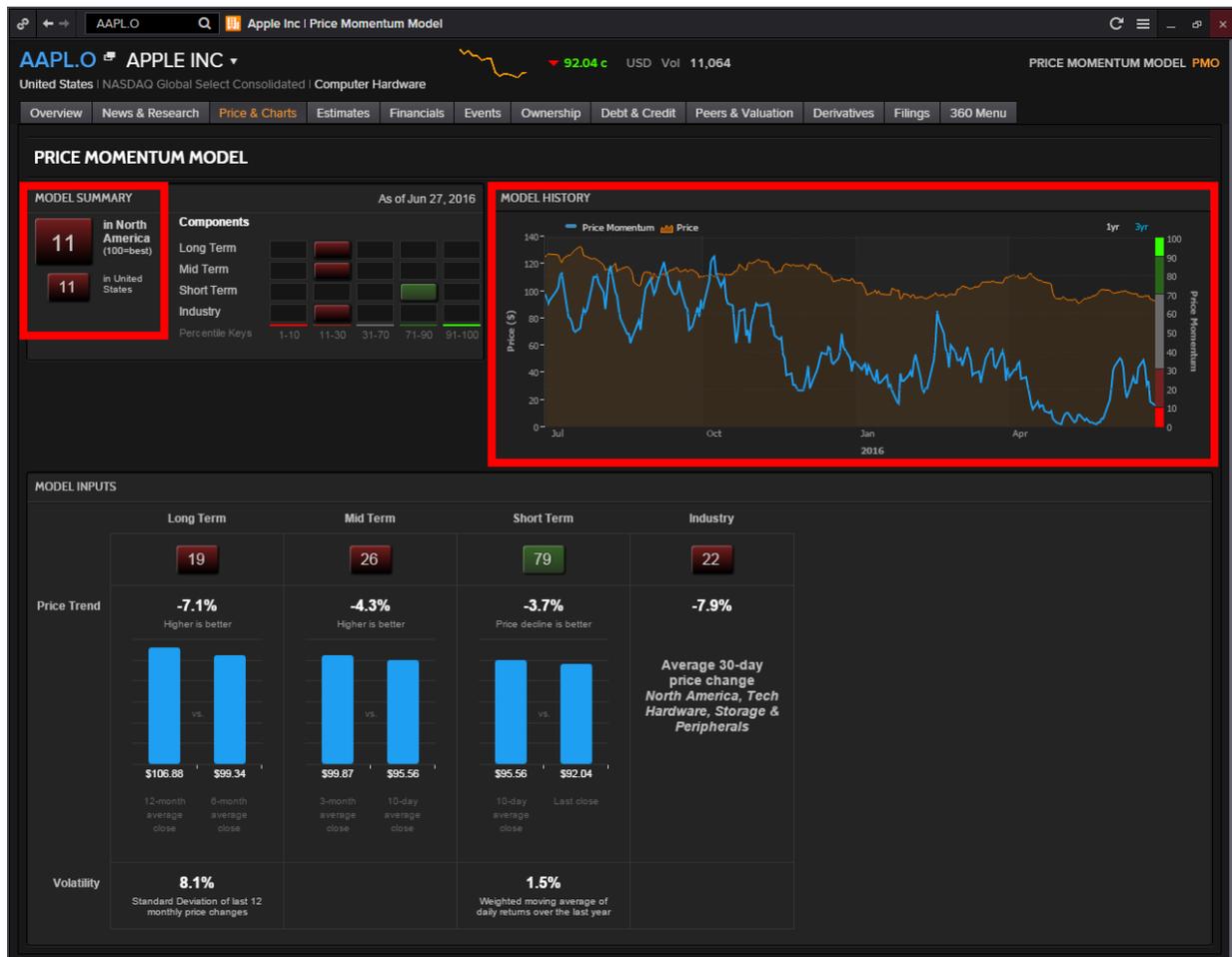
The Short Term component compares the most recent closing price to the average daily closing price over the last ten trading days. This component captures the phenomenon that, at short-term horizons, there is negative auto-correlation in returns - the biggest winners over the last week tend to be losers in the following week or so.

The Short Term component rewards stocks whose prices have decreased over the last ten days. It is normalized by volatility, using an exponentially weighted moving average of daily returns over the last year.

### Industry Component

The Industry component captures the power of price momentum at the industry level. Namely, industries that have outperformed over the last 1-2 months tend to continue to outperform. The model ranks stocks on the basis of the average price change of its industry/region peers over the last month.

## How to Use the Price Momentum Model?



When you click on the “Price Momentum Model” option under the “Prices and Charts” tab, the above page would load.

There are a few things to note from the above page.

Firstly, the **Model Summary**.

In the Model Summary, there is a “11” which is highlighted in red. What this figure means is that across all the components, the equity beat 11 percentile of its peers, here in comparison to “North America” and “United States”

Secondly, the **Model History**.

In the Model History, there is a chart providing the past performance of the price momentum model and the trading price of the equity instrument. The blue line on the chart represents the price momentum predicted by the model against the actual trading price, which is represented by the orange line.

An important thing to note is the colour bar located at the far right of the chart. The different colours of this bar which coincides with the figures in the Model Summary indicate whether the recommendation is Strong Sell, Strong Buy or anything in between.

Bright Red (0-10): Strong Sell  
 Dull Red (10-30): Sell  
 Grey (30-70): Hold  
 Dark Green (70-90): Buy  
 Bright Green (90-100): Strong Buy



Thirdly, at the bottom of the page, there is a section about **Model Input**.

Here, several charts which show the breakdown of the different components, the Long, Mid, Short Term and Industry allows users to have a better understanding about how the final figure “11” was derived.

One can view the criteria here, for the Long Term and Mid Term Component which states that “Higher is Better” for the Long and Mid Term periods is better. While this is easily understood - a higher price in the long run would signal an upward trend in price, the short term component may not be so easily understood at first glance.

While the LT and MT components try to explain the longer term price trend, the price should be declining in the short term in order to encourage a smooth entrance into the market. Hence “Price decline is better” would imply that the investor is able to buy into the market at a lower price.

The industry component would simply provide the investor an overview of how the specific equity is performing in comparison to other equity instruments in the same industry. Hence, even if its other components are performing badly but the equity is performing well compared to others in the same industry, it could imply that the industry on a whole is on a decline.

## Analyst Revisions Model

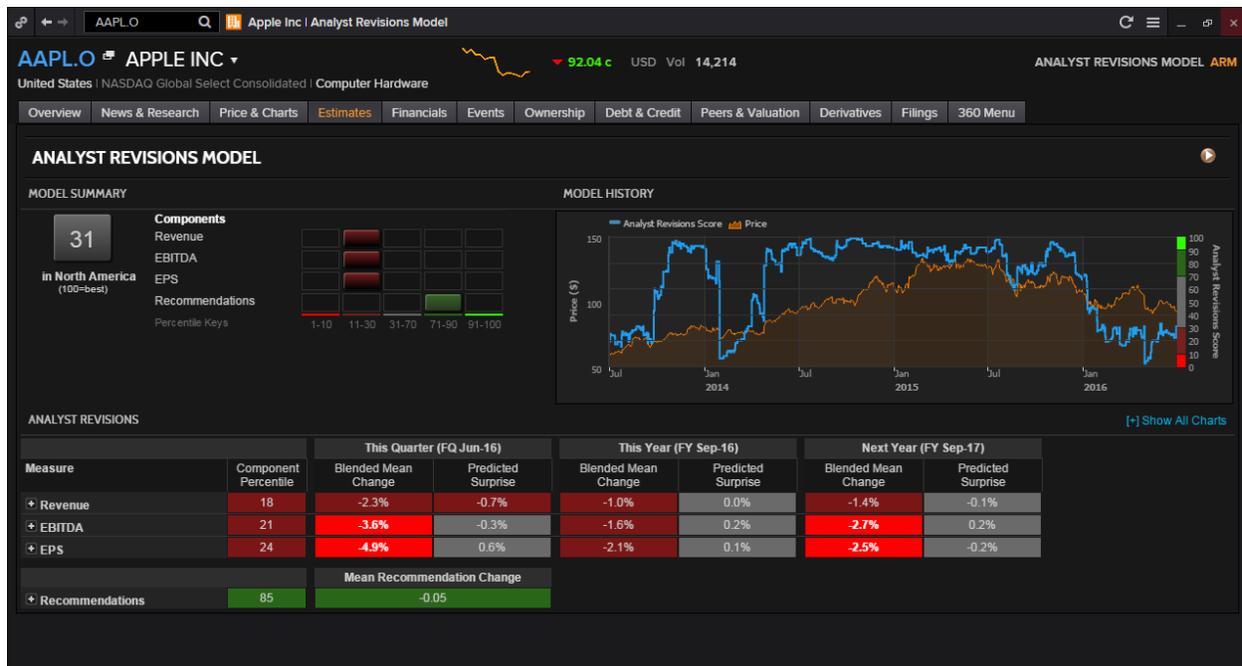
### Overview

StarMine’s Analyst Revisions Model (ARM) is a percentile (1-100) ranking of stocks based on changes in analyst sentiment, with 100 representing the highest rank. The model is highly predictive of relative price movement and is effective across stocks in each capitalization category, investment style, and market sector.

StarMine’s Analyst Revisions model (ARM) is a proprietary model that allows you to observe the key drivers for a stock by looking at individual revision components. For each stock, StarMine determines the most relevant estimate measures to include in ARM:

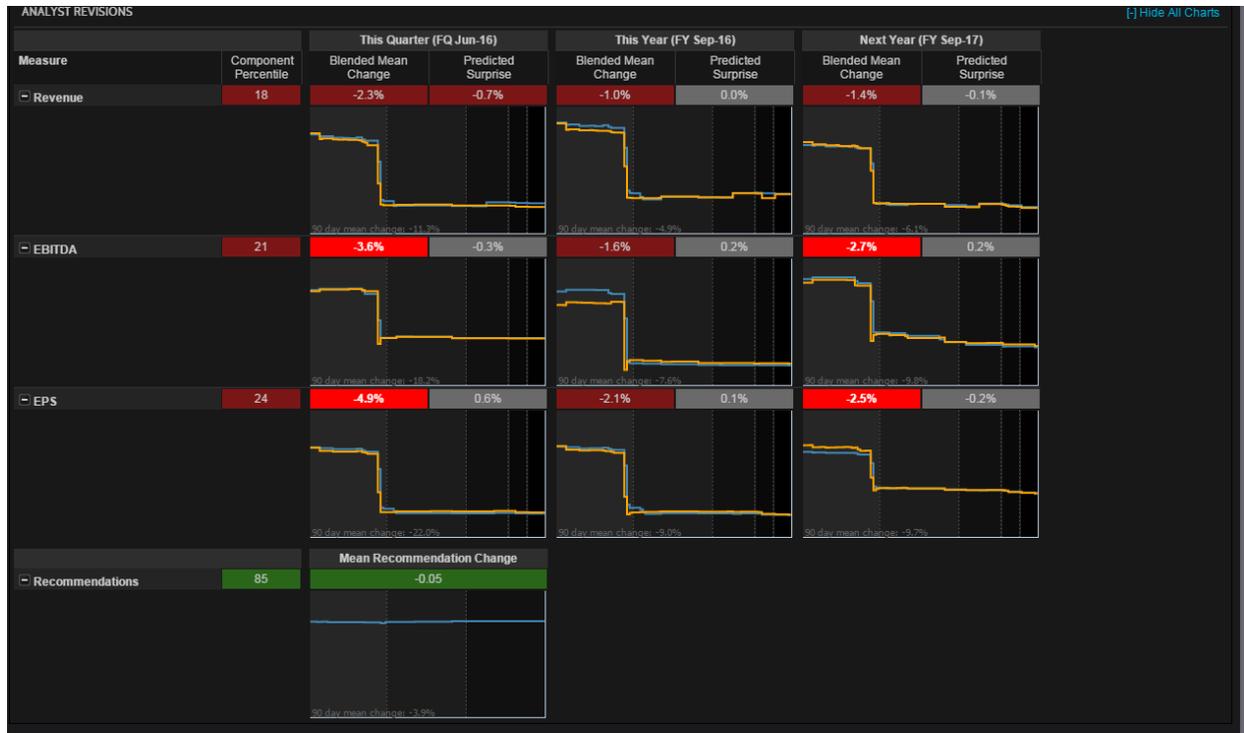
- StarMine’s Preferred Earnings measure, which is EPS for most stocks
- EPS or EBITDA, depending on what was used as the Preferred Earnings measure
- Revenue, where available
- Recommendations, for all securities for which recommendations data is available

### How to Use the Analyst Revisions Model?



The model summary displays the overall percentile rank of the stocks in its region along with bar charts of how the individual components of the models have fared.

The model history would chart the stock price and the changes in the percentile score over time, showing how well analyst revisions have predicted the performance of the stock.



The **analyst revision** portion displays the percentile score for each of the components of the model. As shown in the above image, you are able to display charts for all the different factors.

For each estimate measure, the model is able to display changes over the past 90 days in the mean estimate and predicted surprise for

- the current quarter
- the current year
- the next year.

Predicted surprise displays the different between the current values for mean estimate and SmartEstimate. Charts here display the movement of mean estimate and SmartEstimate over time.

The numerical scores would incorporate the percentage change in each of the 7, 14, 30, 60 and 90 day change periods.

The **recommendations** is in dark green as shown above, indicating a buy recommendation. The mean change figure of '-0.05' incorporates the change in the consensus recommendation for each of the 30,60, and 90-day change periods.

## Earnings Quality

### Overview

StarMine research findings have determined that the market is inefficient in differentiating between sustainable and unsustainable sources of earnings. In light of these findings, StarMine has developed its Earnings Quality (EQ) model - a percentile (1-100) ranking model developed using a systematic, quantitative methodology that evaluates earnings quality according to sustainability. The EQ model assigns higher rankings to companies that are more likely to sustain their earnings.

To generate its proprietary Earnings Quality (EQ) scores, StarMine uses computer-driven models to analyze financial statements and to calculate rankings for more than 35,000 companies worldwide. Data is updated daily. These scores have proven to be reliable predictors of a company's ability to sustain high earnings over the coming quarters.

With the StarMine EQ score, you can objectively compare a company's earnings quality to that of other companies:

- The model favors companies whose earnings are backed by cash flows and other sustainable sources.
- The model penalizes stocks driven by accruals and other less sustainable sources.
- Low scores should be considered more bearish, high scores more bullish.

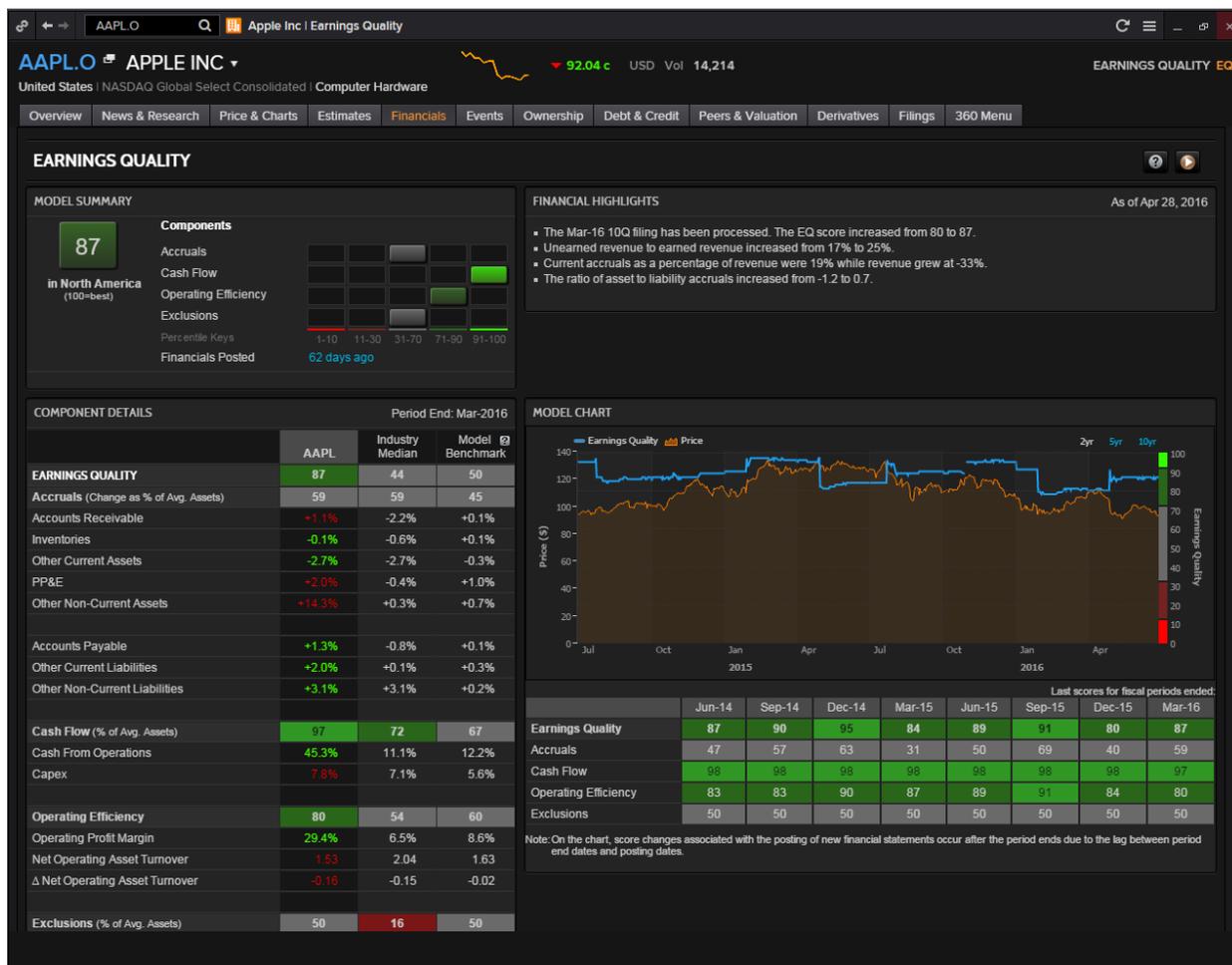
### Model Components

The sources that StarMine's research has found to be most predictive of earnings sustainability are:

- Accruals
- Cash flow
- Operating efficiency
- Exclusions (North America only)

These sources are the components of the EQ model.

### How to Use the Earnings Quality Model?



The **Model summary** displays the overall percentile score for the company relative to its region, and graphs the individual component scores that go into the overall score. Financials Posted indicates how recently the company filed its latest financial figures.

The **Financial Highlights** displays highlights from recent financial results, providing a quick summary of what is really going on in the fundamentals of the company.

**Component Details** displays a breakdown of each component. Values in green have a positive effect on the component score, while values in red have a negative effect.

**Earnings Quality History** has two different components. The chart in displays history for 2, 5, or 10 years (if available). It also shows stock price history. Roll over a point on the chart to see data for that date.

The table below the chart gives detailed scores for previous fiscal periods. These periods correspond to quarterly, semiannual or annual data, depending on the frequency of financial reporting by the company.

The table displays a maximum of eight columns of data, or up to five full years of history. For example, a company that reports financial results each quarter would have eight columns of quarterly data, while a company that reports only annual results would have five columns of annual data.

## Relative Valuation

### Overview

StarMine Relative Valuation is a percentile (1-100) ranking of stocks based on price and enterprise value multiples

There are a few benefits to using this model:

- Compare 12-month forward or 12-month trailing multiples for the focus company with average multiples for peers
- Customize the list of company peers
- Compare the focus company's current and historical multiples in table and chart form
- Quickly see which metrics show a significant premium or discount, thanks to color-coding
- Select a metric to create a price target in Price Target Builder
- View the company's score in its region, country, and sector, using the StarMine Relative Valuation Model
- Analyze earnings per share (EPS) and revenue growth metrics for the company and its peer

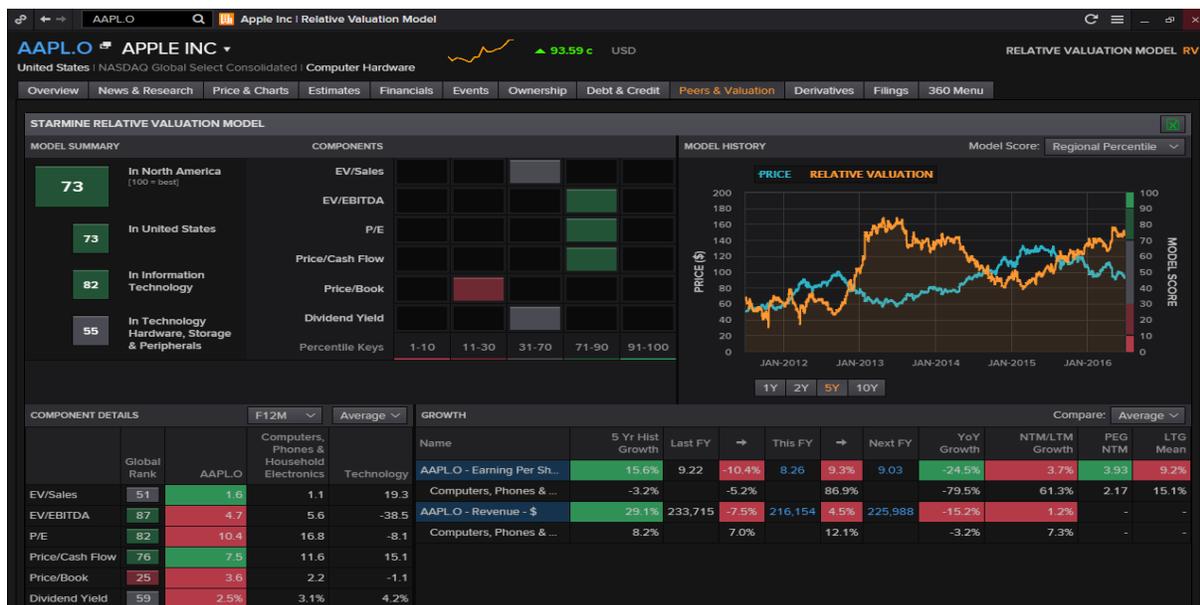
### Valuation Metrics

Relative Valuation displays a wide range of valuation metrics for a focus company and its peers, including:

- Market capitalization
- Net debt (or cash)
- Enterprise value (EV)
- Price multiples (P/E, P/Cash Flow, P/Sales, P/Book, EV/EBITDA or EV/Sales)

One good thing to note is that there are two different Relative Valuation tools available on Eikon. While one provides a snapshot view of the relative valuation available (Relative Valuation Model), the other provides a more thorough explanation of relative valuation calculated for the particular company.

Below is the Relative Valuation Model.



How to Use the Relative Valuation Tool?

**Apple Inc** **AAPLO** Last: 93.59 c USD ▲ +1.55 1.68% Close: 93.59 Buy

Overview Price Research News Debt Valuation 360 Menu

### RELATIVE VALUATION

**CURRENT VALUATION SUMMARY**

Market Valuation: Market Cap USD 512,632 MM, Net Debt USD 24,589 MM, Enterprise Value USD 537,221 MM

Fiscal Year Ratios (with SmartEstimates):

	FY0 Sep 2015	FY1 Sep 2016	FY2 Sep 2017
P/E	10.2	11.3	10.4
P/Sales	2.2	2.4	2.3

**PEER COMPARISON** View: Forward Valuation (Next Twelve Month) Show Peer: Median

Name	EV/Sales NTM	EV/EBITDA NTM	P/E NTM	Price/Cash Flow NTM	Price/Book NTM	Dividend Yield NTM
AAPLO - APPLE INC	1.6	4.7	10.4	7.5	3.6	2.5%
Peer Median (Edit Peers)	2.2	7.9	11.2	8.8	2.0	3.8%
Premium/Discount to Peers	-27.4%	-40.2%	-6.8%	-14.9%	+79.1%	-35.0%
Computer Hardware	N/A	N/A	N/A	N/A	N/A	N/A
Technology Equipment	N/A	N/A	N/A	N/A	N/A	N/A

**HISTORICAL COMPARISON** Historical Range: 10 Years

Name	EV/Sales NTM	EV/EBITDA NTM	P/E NTM	Price/Cash Flow NTM	Price/Book NTM	Dividend Yield NTM
AAPLO - APPLE INC	1.6	4.7	10.4	7.5	3.6	2.5%
AAPLO - 10 Year Median	2.7	9.0	14.1	10.3	4.2	N/A
Premium/Discount to Historical	-42.0%	-47.1%	-26.1%	-27.5%	-13.9%	N/A

One good thing to note is that when doing Peer Comparison, you are able to customise the peer group you are interested in. Clicking on the blue “Edit Peers” would redirect you to the following page for you to edit the list to your liking.

**AAPLO** **APPLE INC** ▲ 93.59 c USD PEER ANALYSIS PEERS

United States | NASDAQ Global Select Consolidated | Computer Hardware

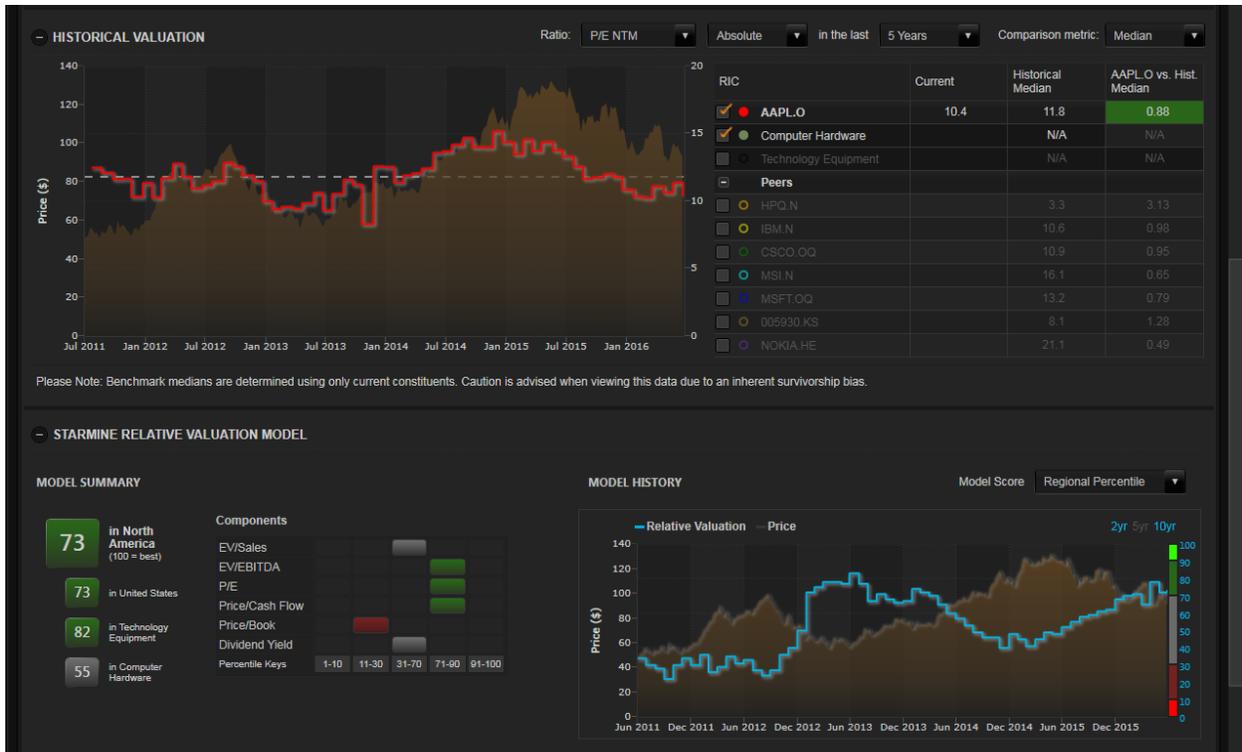
Overview News & Research Price & Charts Estimates Financials Events Ownership Debt & Credit Peers & Valuation Derivatives Filings 360 Menu

### PEER ANALYSIS FOR APPLE INC (AAPLO)

Forward Valuation Add Column Add Rank Edit Peers

Identifier	Company Name	EV / Revenue (SmartEstimate %) (NTM, Consolidated)	EV / EBITDA (SmartEstimate %) (NTM, Consolidated)	Price / EPS (SmartEstimate %) (NTM, Consolidated)	Price / Cash Flow Per Share (SmartEstimate %) (ntm, Consolidated)	Price / Book Value Per Share (SmartEstimate %) (ntm, Consolidated)	Price / Sales Ratio - SmartEstimate* (NTM, Consolidated)	Dividend Per Share Yt % (SmartEstimate%) (NTM, Consolidated)
AAPLO	Apple Inc	2.41	7.27	10.59	7.59	3.66	2.3%	2.
HPQ.N	HP Inc	0.49	5.38	7.25	6.74	NA	0.5%	4.
IBM.N	International Business Machines Corp	2.15	8.64	10.59	8.91	7.97	1.8%	3.
CSCO.OQ	Cisco Systems Inc	2.08	6.26	11.41	10.01	2.07	NA	3.
MSI.N	Motorola Solutions Inc	2.33	8.64	13.31	8.58	NA	2.2%	2.
MSFT.OQ	Microsoft Corp	3.47	9.15	17.14	12.39	5.01	NA	3.
005930.KS	Samsung Electronics Co Ltd	0.80	3.23	9.48	4.96	1.09	NA	1.
NOKIA.HE	Nokia Corp	0.86	6.92	17.62	17.98	1.44	0.8%	3.

Add Security



In the above chart, you are able to specify which company or industry you would like to compare against, as well as the ratio preferred. Below the chart is the snapshot of the summary and history, a similar set up of all StarMine models

**GROWTH**

Show Peer Median

**EARNINGS PER SHARE**

Name	5-Year Historical Growth	Last Year ↔ This Year		This Year ↔ Next Year		This Qtr, YoY Growth	NTM/LTM Growth	PEG NTM	Long Term Growth Mean	
		Last Year	Growth	This Year	Growth					Next Year
AAPL.O - APPLE INC	15.6%	9.22	-10.4%	8.26	9.3%	9.03	-24.5%	3.7%	2.84	9.2%
<b>Peer Median (Edit Peers)</b>	2.8%		7.0%		5.0%		-2.8%	6.7%	2.07	9.4%
HPQ.N HP INC	-16.0%	N/A		1.62	0.9%	1.63	-49.3%	N/A	N/A	N/A
IBM.N INTL BUSINESS MACHS	2.5%	14.92	-9.4%	13.52	3.7%	14.02	-24.6%	-3.3%	N/A	2.6%
CSCO.OQ CISCO SYSTEMS, INC.	6.6%	2.21	5.6%	2.33	5.0%	2.45	2.0%	5.1%	2.24	10.5%
MSI.N MOTOROLA SOLUTIONS	2.8%	3.33	36.6%	4.55	10.5%	5.03	27.5%	21.8%	0.61	10.4%
MSFT.OQ MICROSOFT CORP	0.0%	2.46	8.4%	2.67	8.3%	2.89	-2.8%	8.3%	2.07	8.5%
005930.KS SAMSUNG ELECTRONIC	6.1%	126,303.00	13.8%	143,728.08	5.0%	150,877.63	-0.5%	9.2%	N/A	11.9%
NOKIA.HE	4.1%	0.36	-43.7%	0.20	67.4%	0.34	-58.8%	-4.6%	N/A	8.3%

**REVENUE**

Name	5-Year Historical Growth	Last Year ↔ This Year		This Year ↔ Next Year		This Qtr, YoY Growth	NTM/LTM Growth	
		Last Year	Growth	This Year	Growth			Next Year
AAPL.O - APPLE INC	29.1%	233,715	-7.5%	216,154	4.5%	225,988	-15.2%	1.2%
<b>Peer Median (Edit Peers)</b>	-3.9%		1.5%		2.6%		0.2%	3.6%
HPQ.N HP INC	-3.9%	N/A		46,966	-3.4%	45,374	-55.1%	N/A
IBM.N INTL BUSINESS MACHS	-3.9%	81,741	-2.8%	79,423	-0.4%	79,115	-3.4%	-1.7%
CSCO.OQ CISCO SYSTEMS, INC.	4.2%	49,161	0.0%	49,162	2.6%	50,451	-2.0%	2.4%
MSI.N MOTOROLA SOLUTIONS	-5.6%	5,695	5.4%	6,002	2.6%	6,157	2.3%	4.0%
MSFT.OQ MICROSOFT CORP	8.4%	93,580	-2.1%	91,594	3.9%	95,197	0.2%	3.9%
005930.KS SAMSUNG ELECTRONIC	5.3%	200,653	3.1%	206,855	3.7%	214,433	6.6%	3.4%
NOKIA.HE	-21.7%	13,574	83.3%	24,876	1.6%	25,283	82.8%	31.2%

The growth portion provides you an overview of the different companies and their EPS/Revenue for the this year, last year and the growth as well as an estimate for the next year and a 5 year historical growth figure.

## Intrinsic Valuation Model

### Overview

Intrinsic Valuation is based upon a dividend discount model that uses forecasts about the company's earnings, combined with proprietary adjustments to project future dividends. These dividend flows are then discounted back to the present time to arrive at an intrinsic value for the stock. The same model, when plugging in the current stock price, is also used to derive market-implied EPS growth rates.

Intrinsic Valuation uses StarMine SmartEstimates when available. SmartEstimates helps you better predict future earnings and analyst revisions. Compared to consensus estimates, SmartEstimates places more weight on recent forecasts by top-rated analysts. The model uses SmartEstimates and analyst long-term growth rates for earnings projections.

#### Projected DPS Calculation:

Type of Company	Calculation Method for Projected DPS
Companies that pay dividends currently	<p>The payout ratio (DPS as a percentage of EPS) is determined in three key periods:</p> <p>Year 1 - In FY1, the model outputs a value of DPS and then calculates the implied payout ratio. This value uses DPS estimates when available. For North America, an estimate provided by analysts at Thomson Reuters called implied annual dividend (IAD) is used. This value is an annualized representation of the most recently-announced dividend policy, excluding special dividends. Outside North America, SmartEstimates for dividends are used.</p> <p>Year 5 - Starting with the DPS estimate used in FY1 and adjusting for past dividend momentum and estimates of long-term growth for EPS (LTG), the model provides an estimate for FY5 dividends.</p> <p>Steady State - The steady state payout rate reflects the average payout rate for mature companies.</p>
Companies that do not currently pay dividends	An assumption is made that this policy will persist through FY5. A payout rate in FY10 is then forecast as a function of long-term growth (LTG), a relationship identified by StarMine Research in the empirical data.
Companies with the GICS industry assignment associated with REITs	The dividend payout ratio is set to reflect the legislated requirement (for example, 90% for REITs in the United States) for all periods after FY1. For FY1, the payout ratio is based on the implied dividend and earnings projections.

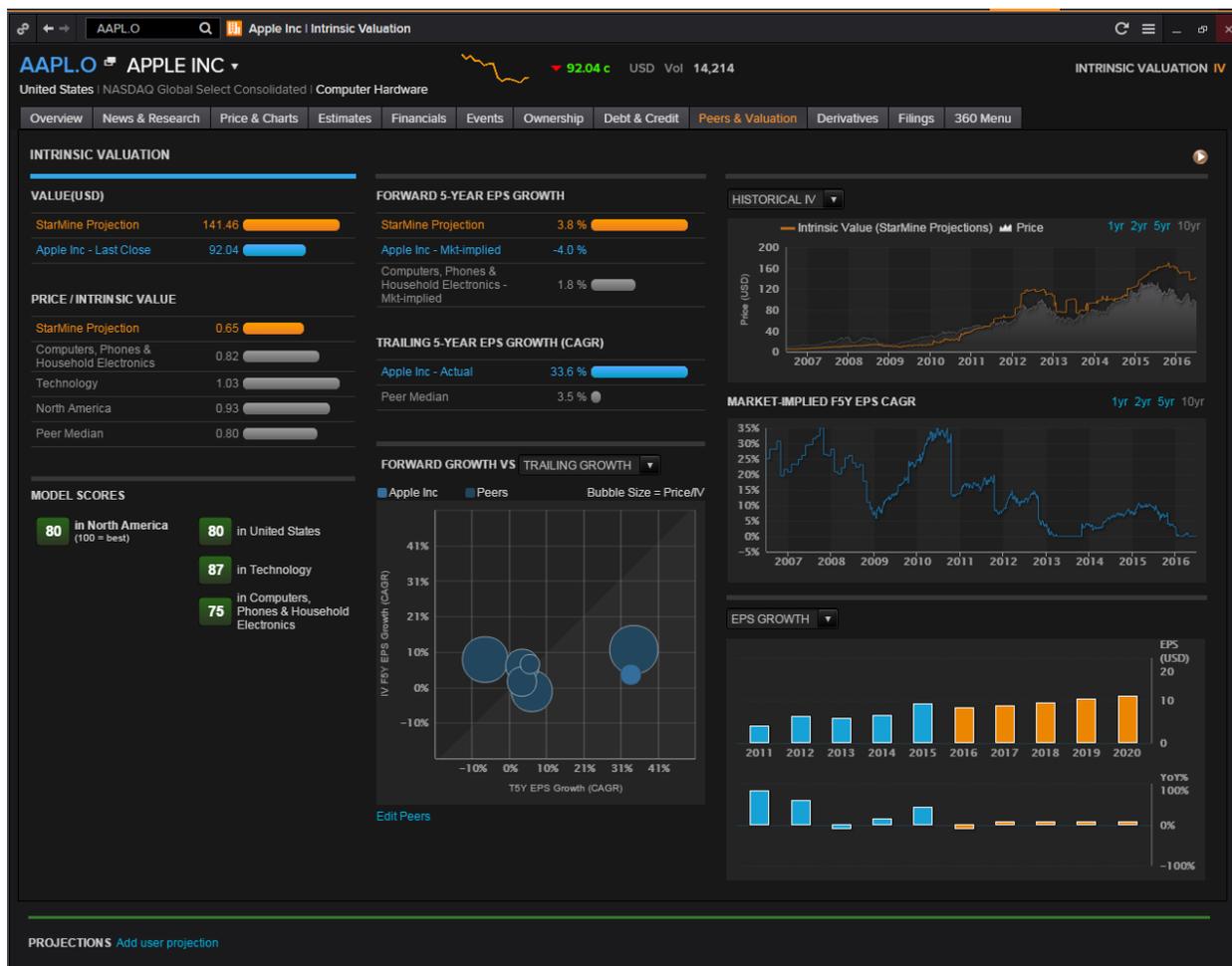
**Calculation Formulae**

EPS = Revenue x Net Margin / Shares Outstanding

When you enter custom projections, the following values are recalculated:

Custom Revenue Revenue	<p>YoY Growth(x) changes to <math>(\text{Revenue}(x) - \text{Revenue}(x-1))/\text{Revenue}(x-1)</math> for current and next period</p> <p>EPS(x) changes to <math>\text{Revenue}(x) * \text{Net Margin}(x) / \text{Shares Outstanding}(x)</math></p> <p>EPS YoY Growth changes to <math>(\text{EPS}(x) - \text{EPS}(x-1))/\text{EPS}(x-1)</math> using the new EPS(x) for current and next period</p>
Custom Revenue YoY Growth	<p>Revenue(x) changes to <math>\text{Revenue}(x-1) * (1 + \text{Revenue YoY Growth}(x))</math> for current and all future periods</p> <p>EPS(x) changes to <math>\text{Revenue}(x) * \text{Net Margin}(x) / \text{Shares Outstanding}(x)</math> using the new Revenue(x) for current and all future periods</p> <p>EPS YoY Growth changes to <math>(\text{EPS}(x) - \text{EPS}(x-1))/\text{EPS}(x-1)</math> using the new EPS(x) for current and all future periods</p>
Custom Net Margin	<p>EPS(x) changes to <math>\text{Revenue}(x) * \text{Net Margin}(x) / \text{Shares Outstanding}(x)</math></p> <p>EPS YoY Growth changes to <math>(\text{EPS}(x) - \text{EPS}(x-1))/\text{EPS}(x-1)</math> using the new EPS(x) for current and next period</p>
Custom Shares Outstanding YoY Growth (FY1)	<p>Shares Outstanding YoY Growth(x) = <math>\text{Shares Outstanding YoY Growth}(\text{FY1}) - [\text{Shares Outstanding YoY Growth}(\text{FY1}) / (\text{Years to Steady State}-1)] * (x-1)</math> for all future periods</p> <p>Shares Outstanding(FY1) = <math>\text{Shares Outstanding}(\text{FY0}) * (1 + \text{Shares Outstanding YoY Growth}(\text{FY1}))</math> for current and all future periods</p> <p>EPS(x) changes to <math>\text{Revenue}(x) * \text{Net Margin}(x) / \text{Shares Outstanding}(x)</math>, for current and all future periods</p> <p>EPS YoY Growth changes to <math>(\text{EPS}(x) - \text{EPS}(x-1))/\text{EPS}(x-1)</math> using the new EPS(x) for current and all future periods</p>
Custom EPS	<p>EPS YoY Growth changes to <math>(\text{EPS}(x) - \text{EPS}(x-1))/\text{EPS}(x-1)</math> using the new EPS(x) for current and next period</p> <p>Net Margin(x) changes to <math>(\text{Shares Outstanding}(x) * \text{EPS}(x)) / \text{Revenue}(x)</math></p>
Custom EPS YoY Growth	<p>EPS(x) changes to <math>\text{EPS YoY Growth}(x) * \text{EPS}(x-1)</math> for current and all future periods</p> <p>Net Margin(x) changes to <math>(\text{Shares Outstanding}(x) * \text{EPS}(x)) / \text{Revenue}(x)</math> for all periods x and after</p>

## How to Use the Intrinsic Valuation Model?



The value portion displays the prior day's closing price of a stock and its projected value while the price/intrinsic value displays a stock comparison within its industry, sector, and region.

**Forward 5-year EPS Growth** compares the projected growth calculated by StarMine to the industry and to the market-implied growth.

**Forward Growth VS** displays a diagram of the forward growth compared to the trailing growth or forward P/E for the company and its peers. Bubbles in the chart area in white indicate that, for the companies in question:

- Forward growth is greater than trailing growth, which signals a company with accelerating growth, for a trailing growth chart
- The PEG ratio is less than 1

**Market Implied F5Y EPS CAGR** plots the historical value of market expectations for the EPS growth for the company over the chosen period.

**EPS Growth** plots historical and projected EPS and YOY growth rates.

**Historical and Implied Future ROE** plots five years of historical ROE and ROA (when available), and annual figures for future implied ROE for ten years followed by five-year increments out to FY15.

The **Trailing 5-year EPS Growth** compares company trailing growth to that of its peers.

## Value Momentum

### Overview

StarMine's Value-Momentum (Val-Mo) model can be used in a stock ranking or screening system, as an input into a quantitative multi-factor investment model, or for reference in a non-quantitative strategy.

The Value-Momentum model is a percentile (1-100) ranking of stocks based on recent valuation and momentum characteristics. These characteristics are described in Combining value and momentum signals.

The model uniquely captures the signals given by valuation and momentum characteristics by combining four of StarMine's stock selection models:

- Intrinsic Valuation Model and Relative Valuation Model for value characteristics
- Analyst Revisions Model and Price Momentum Model for momentum characteristics

The combination of global ranks on each of these four input models results in the overall model score for a security. The overall score is generated in two steps:

1	<p>StarMine includes only non-micro-cap stocks (as defined by the top 98.5% of market cap in each region) in the “first-pass” ranking to ensure that illiquid micro-cap stocks do not influence the score of any securities.</p> <p>This roughly corresponds to the top 3,000 in North America, top 1,500 in Developed Europe, top 600 in Developed Asia ex-Japan, top 1,500 in Japan, and top 2,500 in Emerging Markets.</p>
2	<p>Micro-cap stocks are then positioned in the “second-pass” such that the original ordering of securities is preserved. Thus, the score is uniformly distributed over the set of all non-micro-cap securities. However, the distribution is allowed to be non-uniform when micro-caps are included.</p>

### How to Use the Value Momentum Model?



The **model summary** displays the component scores display the rankings of the company derived from the Relative Valuation (StarMine RV), Intrinsic Valuation (StarMine IV), Analyst Revisions (StarMine ARM), and Price Momentum (StarMine Price Mo) component models. Component scores are then aggregated to form the overall company score, indicative of the company's ranking compared to other companies in the same region and country.

The **model history** charts the stock price and changes in the stock's percentile score over time.

COMPONENT DETAILS

<b>VALUE</b>	<b>77</b>	<b>MOMENTUM</b>	<b>23</b>
<b>INTRINSIC VALUATION MODEL</b>		<b>ANALYST REVISION MODEL</b>	
	<b>80</b>		<b>31</b>
Price/IV	0.65	Revenue	18
Market Implied 5Y CAGR	-4.0 %	EBITDA	21
		EPS	24
<b>RELATIVE VALUATION MODEL</b>		<b>PRICE MOMENTUM MODEL</b>	
	<b>73</b>		<b>11</b>
EV/Sales	51	Long Term	19
EV/EBITDA	87	Mid Term	26
P/E	82	Short Term	79
Price/Cash Flow	76	Industry	22
Price/Book	25		
Dividend Yield	59		

The component details display a breakdown of the component models that drive the ranking results.

PEER COMPARISON Edit Peers

RIC	Company Name	Val-Mo	Value		Momentum	
			RV	IV	ARM	Price Mo
AAPL.O	Apple	40	73	80	31	11
HPQ.N	HP	93	95	N/A	56	33
IBM.N	IBM	76	81	73	54	46
CSCO.OQ	Cisco Systems	92	75	82	74	55
MSI.N	Motorola	47	58	53	34	68
MSFT.OQ	Microsoft	43	47	56	32	74
005930.KS	Samsung Elec	97	83	66	97	88
NOKIA.HE	Nokia Corp	8	30	43	9	26
<b>Peer Avg.</b>		62	68	57	48	50

PEER VALUE/MOMENTUM

The peer comparison displays model scores and component rankings for peer companies. The default list of peers is based on competitor lists provided in filings, analyst cross coverage, business classification, and revenue proximity. This hierarchical approach produces very reasonable sets of peer companies for most securities.

Peer Value/Momentum plots the average ranking of the focus stock and its peers. It provides a visual cue indicating if stocks have a bullish or bearish outlook:

- Green area - bullish outlook
- Grey area - lack of advantage
- Red area - bearish outlook

## Credit Risk - Combined Model

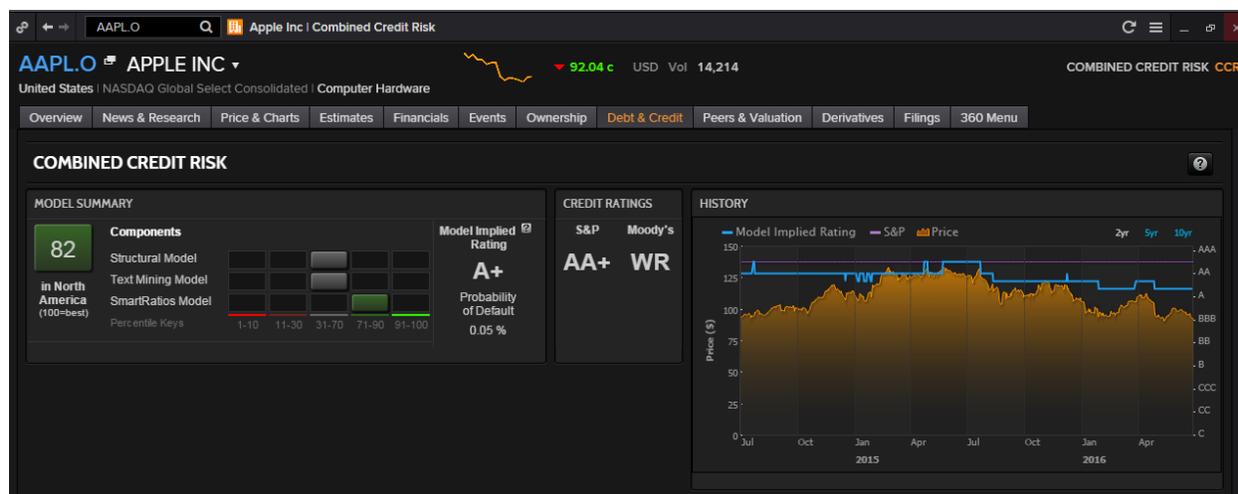
### Overview

The Credit Risk Combined Model is a proprietary corporate credit risk model suite that includes models assessing a company's default risk through both the accounting ratio analysis and the contingent claims analysis. In addition, StarMine's credit risk model suite includes a novel third approach that applies cutting-edge machine learning algorithms to mining textual data for information regarding a company's financial health.

Structural Model	The StarMine Structural Credit Risk Model (StarMine SCR) evaluates credit risk from the equity market's view via StarMine's proprietary extension of the Merton structural default prediction framework that models a company's equity as a call option on its assets.
SmartRatios Model	The StarMine SmartRatios Credit Risk Model (StarMine SRCR) utilizes financial ratio analysis for credit risk assessment and incorporates both reported information and forward-looking estimates via the StarMine SmartEstimate.
Text Mining Model	The StarMine Text Mining Credit Risk Model (StarMine TMCR) mines the language in textual data from multiple sources (Reuters News, StreetEvents conference call transcripts, corporate filings, and select broker research reports) to evaluate companies' potential financial distress.

The combination of these three models generates a single, final estimate of public company credit risk that is more accurate than using any one data source alone.

### How to Use the Combined Credit Risk Model?



The **Model Summary** provides component scores that display the credit quality rankings of the company derived from the Structural, Text Mining, and SmartRatios models respectively. Component scores are then aggregated to form the total company score, indicative of:

- The company's ranking compared to other companies in the same region
- The relative probability of the company to default on its credit obligations.

A high score indicates a lower credit risk. The Implied rating is based on the default probability derived from the component models.

The **credit ratings** portion displays Standard & Poor’s and Moody’s Foreign Issuer Long Term Rating. The above illustration shows a stock rated: A+ by the model AA+ by S&P no rating available from Moody’s.

COMPONENT DETAILS

<b>STRUCTURAL MODEL</b>	<b>65</b>	<b>TEXT MINING MODEL</b>	<b>70</b>
Structural Leverage	49	Transcripts	74
Asset Volatility	72	Reuters News	21
Asset Drift	26	Filings	70
		Research	54
<b>SMARTRATIOS MODEL</b>	<b>86</b>		
Profitability	85		
Leverage	83		
Coverage	77		
Liquidity	60		
Growth & Stability	59		

The **Component Details** displays a breakdown of the component models that drive the ranking and rating results. The weight given to each component model is based on the volume of text on a given company. Hence, the weight of the Credit Risk - Text Mining Model increases with increasing text volume.



The **Peer Comparison** displays credit quality ratings for the top peer companies. The default list of peers is based on competitor lists provided in filings, analyst cross coverage, business classification, and revenue proximity. This hierarchical approach produces very reasonable sets of peer companies for most securities.

The **Peer Credit Ratings** plots the average rating of the focus stock and its peers. The unit line joining the same rating pairs on both axes provides a visual cue indicating if stocks have a bullish or bearish outlook:

- Stocks above the line, in the green area, have a bullish outlook
- Stocks on the line indicate that the model and agency ratings are identical, signalling a lack of advantage
- Stocks below the line, in the pink area, indicate a lower model rating compared to the agency rating, signalling a bearish outlook

## 7. Equity Derivatives

There are four main equity derivatives which are mainly traded

1. Equity Options
2. Equity Warrants
3. Index Options
4. Index Futures

### Equity Index Futures

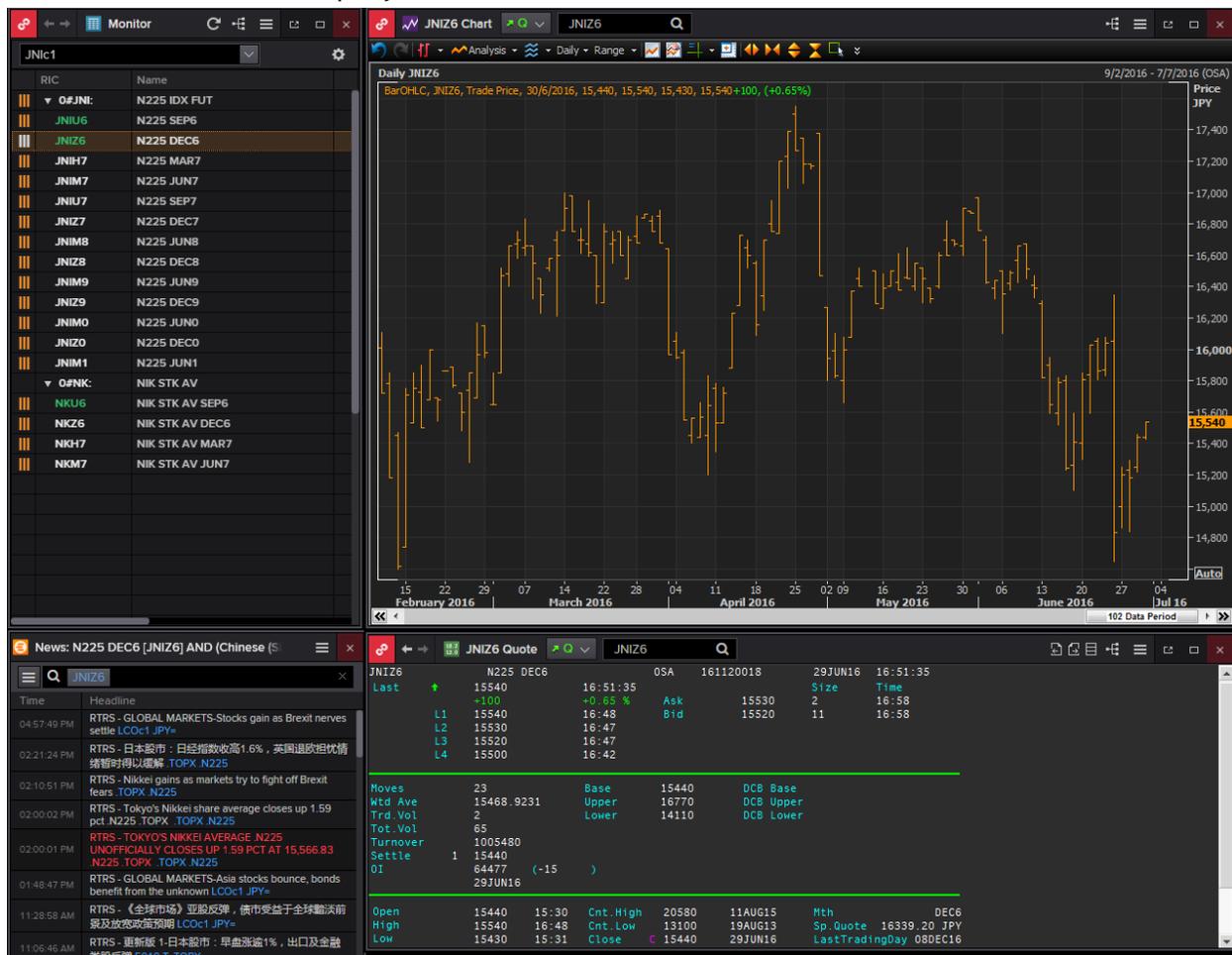
Equity Index Futures are futures contracts whose value is dependent on the level of an underlying stock index, such as the FTSE 100 or the S&P500.

Similar to commodity futures, the different futures contracts each have a continuation RIC.

Continuation RICs are constructed by using a lower case “c” and a number which denotes whether it is the first month or second or third in the series.

e.g. FFI (FTSE100 Future root) c (continuation) 1 (first month) = FFIc1

In order to monitor different equity index price movements, a page could be set up as shown below, with a monitor, news, quotes and charts. By linking the pages together, you are able to quickly monitor different chain contracts as per your need.



## Index Futures Fair Value Calculator <IFFV>

An application that may come in useful is the Index Futures Fair Value Calculator <IFFV>. The FV calculator adopts the FV assumption where it is believed that futures contracts should be priced given such things as current index level, index dividends, and days to expiration and interest rate. This excludes short term supply and demand fluctuations.

Here, Fair Value = Cash Price x (1 + DaystoDelivery x (Fund Rate - Div Yield) x 100)/CcyYearBasis

Contracts	Latest	Fund Rate	Div Yield	Fair Value	Basis	Spot-FV Spread	Calendar Spread	Premium	Implied Yield	Implied Rate
Sep 16	2,037.50	0.607	2.614	2,027.28	1.41	8.81		10.22	0.284	2.978
Dec 16	2,019.80	0.629	2.614	2,017.38	-16.29	18.71	-17.70	2.42	2.356	0.889
Mar 17	2,012.40	0.649	2.614	2,007.64	-23.69	28.45	-7.40	4.76	2.283	0.982
Jun 17	2,007.10	0.667	2.614	1,998.18	-28.99	37.91	-5.30	8.92	2.152	1.133
Sep 17	2,005.10	0.687	2.614	1,988.95	-30.99	47.14	-2.00	16.15	1.948	1.360
Dec 17	2,004.30	0.707	2.614	1,979.99	-31.79	56.10	-0.80	24.31	1.780	1.550
Mar 18	2,010.20	0.729	2.614	1,971.34	-25.89	64.75	5.90	38.86	1.474	1.884
Jun 18	2,016.10	0.751	2.614	1,962.93	-19.99	73.16	5.90	53.17	1.252	2.134
Dec 18	2,011.10	0.797	2.614	1,946.23	-24.99	89.86	-5.00	64.87	1.292	2.139
Dec 19	2,034.20	0.856	2.614	1,915.12	-1.89	120.97	23.10	119.08	0.879	2.621
Dec 20	2,057.30	0.948	2.614	1,889.95	21.21	146.14	23.10	167.35	0.713	2.887

1. In the Eikon Toolbar, search <IFFV>
2. Enter/Search the Cash Index Code (e.g. <.STI>)
3. Choose a Contract Root

### Column Description

- Dividend Yields: widely used to measure the income return of a share
- Calendar Spread: different between current price of a future and price of its nearest term contract
- Basis: Futures contract price - index price
- Premium: futures price - fair value
- Implied Rate: difference between spot rate and the futures rate (+ve: higher future borrowing rate)
- Implied yield: anticipated yield from a futures contract based on the current spot rate.

## 8. Equity Applications

### Advanced Events Search <ADVEV>

One page which would be useful for investors to look at is the Advanced Events Search <ADVEV> application. Using this application, users can view future events, such as

1. Earnings and Corporate
2. Dividends
3. Institutional
4. Conference
5. General
6. Transactions
7. Corporate Actions (CorAx)
8. Economic

Date	Event Type	RIC	Event Name	Dial-In
29-Jul-2016 04:30	Earnings Conference Call	GOOGL.OQ	Q2 2016 Alphabet Inc Earnings Call	T
28-Jul-2016	NTS Earnings Release	GOOGL.OQ	Q2 2016 Alphabet Inc Earnings Release	
28-Jul-2016	NTS Earnings Release	005930.KS	Q2 2016 Samsung Electronics Co Ltd Earnings Release	
27-Jul-2016 05:00	Earnings Conference Call	AAPL.OQ	Q3 2016 Apple Inc Earnings Call	T
27-Jul-2016	AMC Earnings Release	AAPL.OQ	Q3 2016 Apple Inc Earnings Release	
20-Jul-2016 05:30	Earnings Conference Call	MSFT.OQ	Q4 2016 Microsoft Corp Earnings Call	T
20-Jul-2016	AMC Earnings Release	MSFT.OQ	Q4 2016 Microsoft Corp Earnings Release	
07-Jul-2016	NTS Trading Statement Release	005930.KS	Q2 2016 Samsung Electronics Co Ltd Trading Updatae	
30-Jun-2016	NTS Regular Dividends	005930.KS	0593qx.L Interim Cash Dividend of gross going ex on Jun ...	
30-Jun-2016	NTS Regular Dividends	005930.KS	0593q.L Interim Cash Dividend of gross going ex on Jun 2...	
30-Jun-2016	NTS Regular Dividends	005930.KS	SMSN.BA Interim Cash Dividend of gross going ex on Jun ...	

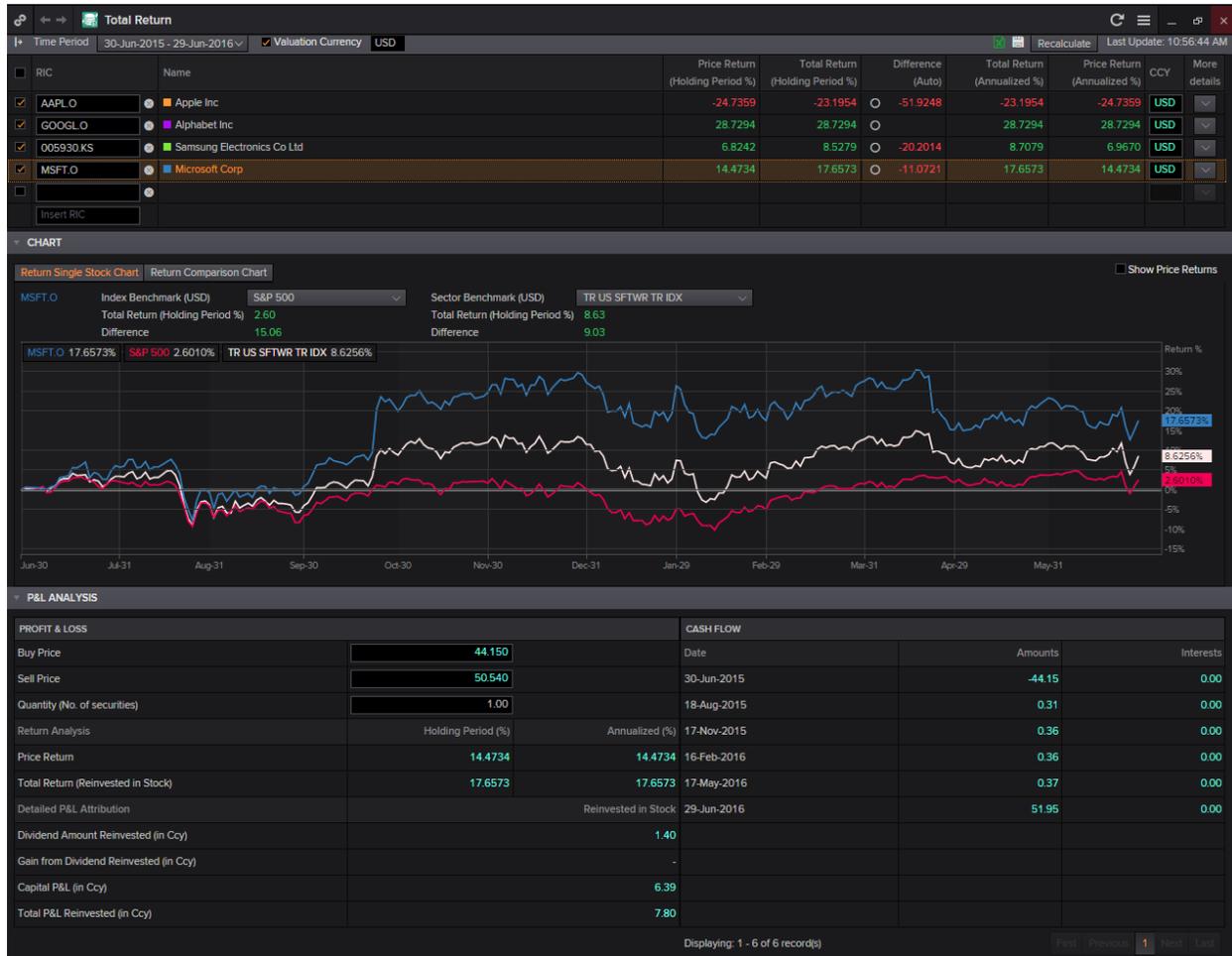
1. In the Eikon Toolbar, search <ADVEV>
2. Define the Events Date (Up to the Next 30 Days), Event Type
3. Search a list of RICs or Companies that you are interested in looking for .
4. If any, define the industries and countries as well as the specific content type you are interested in.

Note: If you see this , it implies that a transcript is to be expected. A green sign indicates a live delivery, grey indicates an intraday delivery and light blue indicates near-live delivery.

Other options are as follows.  is to indicate a brief will be provided.  indicates the availability of a presentation.  is for audio,  for mp3 and  for guidance.

## Total Return <TRTR>

In order measure the total return from holding an equity, Eikon has a total return calculator <TRTR> which allows users to measure the price return as well as the total return during both the holding period and the annual period.



1. In the Eikon toolbar, search <TRTR> to open the application
2. Search for the different RICs that you would like to use. (e.g. AAPL.O for Apple)  
If you do not know the RIC, you are also able to search for the company and select from the auto suggest
3. Below the table of figures would be chart area. From the chart area, you are able to choose either a return of a single stock or to do a return comparison.
4. Located at the bottom of the page is a P&L analysis which helps you to calculate the amount of profit or loss you are likely to make if you invest in this stock, after factoring in your dividend reinvestment profit.

### Blended Order Book <BOB>

The blended order book brings together market data on buying and selling interests in financial instruments. It displays market data gathered from exchanges and venues, market makers and trade reporting venues.

The main purpose of this app is to display unified liquidity. You are able to set a single currency to display data from multiple venues, selecting the venue display, plot a liquidity pie chart etc.

Venue	Count	AccSize	Size	Bid	Ask	Size	AccSize	Count	Venue
SES	1	61,400	61,400	15.810	15.820	116,100	116,100	1	SES
SES	1	140,000	78,600	15.800	15.830	103,300	219,400	1	SES
SES	1	180,600	40,600	15.790	15.840	221,100	440,500	1	SES
SES	1	199,600	19,000	15.780	15.850	140,100	580,600	1	SES
SES	1	205,000	5,400	15.770	15.860	37,500	618,100	1	SES
SES	1	214,300	9,300	15.760	15.870	19,700	637,800	1	SES
SES	1	238,500	24,200	15.750	15.880	27,800	665,600	1	SES
SES	1	247,900	9,400	15.730	15.890	8,200	673,800	1	SES
SES	1	248,000	100	15.720	15.900	87,000	760,800	1	SES
SES	1	250,500	2,500	15.710	15.910	3,100	763,900	1	SES
SES	1	268,800	18,300	15.700	15.920	13,900	777,800	1	SES
SES	1	269,300	500	15.660	15.930	5,000	782,800	1	SES
SES	1	282,400	13,100	15.650	15.940	5,100	787,900	1	SES
SES	1	282,500	100	15.630	15.950	113,600	901,500	1	SES
SES	1	283,400	900	15.620	15.960	6,300	907,800	1	SES
SES	1	291,000	7,600	15.610	15.970	9,100	916,900	1	SES
SES	1	318,200	27,200	15.600	15.980	43,600	960,500	1	SES
SES	1	318,800	600	15.590	15.990	80,400	1,040,900	1	SES
SES	1	321,800	3,000	15.580	16.000	316,300	1,357,200	1	SES
SES	1	327,300	5,500	15.550	16.010	51,100	1,408,300	1	SES
	20		327,300	15.751	15.911	1,408,300		20	
	20		327,300	100.000%	100.000%	1,408,300		20	

1. In the Eikon toolbar, search <BOB> in order to open the application
2. In the search bar within the app, search for the RIC or the company you are interested in. A list as shown above would be generated.
3. For stocks that trade in more than one exchange, click the  sign at the top of the page in order to generate a pie chart or bar chart to represent how much of that stock was traded in each exchange.

The left side of the table represents the demand amount while the right side represents the supply. Hence the total number of shares in the market to be bought and sold at each price level is provided. Thus, the summation at the bottom of the page would signal whether or not there is more buying or selling,

More buy orders than sell orders would imply that the price will strengthen since price tends to strengthen with more buying demands and vice versa.

Prices on this page are listed from the highest bid (highest price you can sell) and the lowest ask (the cheapest you can buy).

## Time and Sales Application <TAS>

The times and sales application (TAS) will display real time “Times and Sales” as well as Volume Weighted Average Prices (VWAPs) which would act as a benchmark for traders.

The TAS includes details of individual trade; the trade price, bid and ask spread at the time of the trade and the volume of trade etc.

Note that data here can be viewed on a blended mode, which implies that results from different exchanges and venues can all be displayed on a single page.

There are two ways to obtain TAS and VWAP information.

Firstly, using the <TAS> application in Eikon.

Timestamp	Last	Trade Price	Trade Volume	Best Bid	Bid Size	Best Ask	Ask Size	Turnover	Calc VWAP	Flow	Trade Flags
30/6/2016 11:17:47.237	15.810	15.81	700	15.810	23,600	15.820	110,500	11,067	15.8188	380,707	Normal Price
30/6/2016 11:17:26.645	15.810	15.81	300	15.810	13,600	15.820	113,000	4,743	15.8188	369,640	Normal Price
30/6/2016 11:17:16.284	15.810	15.81	4,200	15.810	14,500	15.820	112,100	66,402	15.8188	364,897	Normal Price
30/6/2016 11:17:01.735	15.810	15.81	4,300	15.800	12,600	15.810	58,200	67,983	15.8188	298,495	Normal Price
30/6/2016 11:17:01.735	15.810	15.81	3,200	15.800	12,600	15.810	58,200	50,592	15.8188	230,512	Normal Price
30/6/2016 11:17:01.735	15.810	15.81	14,500	15.800	12,600	15.810	58,200	229,245	15.8188	179,920	Normal Price
30/6/2016 11:17:01.733	15.810	15.81	100	15.800	12,600	15.810	58,200	1,581	15.8189	-49,325	Normal Price
30/6/2016 11:17:01.733	15.810	15.81	3,000	15.800	12,600	15.810	58,200	47,430	15.8189	-50,906	Normal Price
30/6/2016 11:17:01.733	15.810	15.81	200	15.800	12,600	15.810	58,200	3,162	15.8189	-58,336	Normal Price
30/6/2016 11:17:01.733	15.810	15.81	900	15.800	12,600	15.810	58,200	14,229	15.8189	-101,498	Normal Price
30/6/2016 11:17:01.733	15.810	15.81	100	15.800	12,600	15.810	58,200	1,581	15.8189	-115,727	Normal Price
30/6/2016 11:17:01.733	15.810	15.81	100	15.800	12,600	15.810	58,200	1,581	15.8189	-117,308	Normal Price
30/6/2016 11:17:01.733	15.810	15.81	10,000	15.800	12,600	15.810	58,200	158,100	15.8189	-118,889	Normal Price
30/6/2016 11:17:01.733	15.810	15.81	3,000	15.800	12,600	15.810	58,200	47,430	15.8189	-276,989	Normal Price
30/6/2016 11:17:01.733	15.810	15.81	2,300	15.800	12,600	15.810	58,200	36,363	15.8189	-324,419	Normal Price
30/6/2016 11:17:01.733	15.810	15.81	2,000	15.800	12,600	15.810	58,200	31,620	15.8189	-360,782	Normal Price
30/6/2016 11:17:01.733	15.810	15.81	8,300	15.800	12,600	15.810	58,200	131,223	15.8189	-392,402	Normal Price
30/6/2016 11:17:01.733	15.810	15.81	6,200	15.800	12,600	15.810	58,200	98,022	15.8189	-523,625	Normal Price
30/6/2016 11:17:00.325	15.800	15.8	4,700	15.800	16,400	15.810	53,900	74,260	15.8189	-621,647	Normal Price
30/6/2016 11:16:55.713	15.800	15.8	1,000	15.800	16,400	15.810	51,400	15,800	15.819	-547,587	Normal Price
30/6/2016 11:16:48.973	15.800	15.8	700	15.800	16,100	15.810	37,000	11,060	15.819	-531,587	Normal Price
30/6/2016 11:16:47.833	15.810	15.81	6,800	15.800	16,000	15.810	53,600	107,508	15.819	-520,527	Normal Price
30/6/2016 11:16:46.685	15.800	15.8	700	15.800	16,700	15.810	58,200	11,060	15.819	-628,035	Normal Price
30/6/2016 11:16:46.424	15.800	15.8	200	15.800	13,600	15.810	64,300	3,160	15.819	-639,095	Normal Price
30/6/2016 11:16:46.404	15.800	15.8	400	15.800	14,000	15.810	67,800	6,320	15.819	-642,255	Normal Price
30/6/2016 11:16:46.395	15.800	15.8	200	15.800	14,200	15.810	67,800	3,160	15.819	-648,575	Normal Price
30/6/2016 11:16:46.385	15.800	15.8	100	15.800	14,300	15.810	66,600	1,580	15.819	-651,735	Normal Price
30/6/2016 11:16:46.385	15.800	15.8	300	15.800	14,600	15.810	66,400	4,740	15.819	-653,315	Normal Price
30/6/2016 11:16:46.385	15.800	15.8	200	15.800	14,600	15.810	66,400	3,160	15.819	-658,055	Normal Price
30/6/2016 11:16:46.375	15.800	15.8	500	15.800	14,800	15.810	66,200	7,900	15.819	-661,215	Normal Price
30/6/2016 11:16:46.375	15.800	15.8	100	15.800	15,400	15.810	66,200	1,580	15.819	-669,115	Normal Price
30/6/2016 11:16:46.375	15.800	15.8	200	15.800	15,600	15.810	66,200	3,160	15.819	-670,695	Normal Price
30/6/2016 11:16:46.365	15.800	15.8	600	15.800	16,200	15.810	61,500	9,480	15.819	-673,855	Normal Price
30/6/2016 11:16:46.335	15.800	15.8	100	15.800	16,200	15.810	66,100	1,580	15.819	-683,335	Normal Price
30/6/2016 11:16:46.324	15.800	15.8	100	15.800	16,400	15.810	66,700	1,580	15.819	-684,915	Normal Price
30/6/2016 11:16:46.315	15.800	15.8	1,200	15.800	16,400	15.810	66,700	18,960	15.819	-686,495	Normal Price

1. In the Eikon Toolbar, search <TAS> in order to open the time and sales application.
2. In the search bar within the application, search for the instrument you are interested in using
3. The application would list the different trades made for this specific instrument. Everytime a solid green or red arrow is shown next to the price, it indicates a change in price.

- One of the column in the page is a calculate VWAP figure which is calculated by Eikon. Note that this figure differs from that in the quote page.

Last	Trd. Vol	Net. Chng	Size	Bid Ask	Size
15.780	100	+0.250	80300	15.780/15.790	40600
15.790		% Chng			
15.790		+1.61 %			
15.790		Moves			
15.790		6588			
<b>IEP</b>					
Offcl. Close			Acc. Volume	Turnover	
Cls. Bid/Ask	15.520 / 15.530	29JUN16	10514300	166875197.70	
Open	16.040	12MEPS 1.7428	INT. Div	Status /	
High	16.040	12MP/E 8.91	Ex. Date	ISIN SG1L01001701	
Low	15.710	12M Div 0.6000	Sp. Div	Sector 0#FIAN.SI	
Cls 29JUN16	15.530	Div Pay 20JUN16	Ex. Date	Corp. Act /	
Yr. Hi 23JUL15	21.500	Div Ex 05MAY16	Fin. Div	News 11:14	
Yr. Lo 12FEB16	13.010	Div Yld 3.86 %	Ex. Date		
VWAP	15.8872	Div. Ccy SGD	Lot. Size 100		
VWAP Vol	9123900				
Avg. Vol. 5D	8956300	Prc Chn1M -0.064 %	M Deal	1390400	

Also, on the TAS application, you are able to plot the VWAP against the traded price as shown below.



The second method to obtain TAS data is to utilise the company overview page as shown below.

1. In the Eikon toolbar, search for the company or RIC you are interested in finding.
2. Navigate Price & Charts > TAS or VWAP depending on which information you are seeking.

**DBSM.SI DBS GROUP HOLDINGS LTD** 15.800 SGD 0.270 1.74% Vol 8,170,100

Overview News & Research **Price & Charts** Estimates Financials Events Ownership Debt & Credit Peers & Valuation Derivatives Filings 360 Menu

**VWAP** 30-Jun-2016 00:00, 30-Jun-2016 11:19, Single Venue

Start: 30-Jun-2016 00:00:00 End: 11:19:49 30-Jun-2016 Now Hold Date & Time Price Limits: - Volume Range: - Update View

Calculation Type: Single Venue Exchanges & Types: Exchanges (1), Types (2) Participation Order Quantity: Rate (%):

**VWAP VOLUME**  
**15.9104 7,326,400** STD DEV 0.074850 TRADES 4,139 AVG TRD SZ 1,770 FIRST 16.0400 LAST 15.8000 LOW 15.7100 HIGH 16.0400

Date	Local Time	Volume	Price	Turnover	Exchange	Trade Type
30-Jun-2016	11:17:01.715	14,500	15.8100	229,245	Singapore SE	Normal Trade
30-Jun-2016	11:16:46.286	40,000	15.8000	632,000	Singapore SE	Normal Trade
30-Jun-2016	11:16:45.805	14,800	15.7900	233,692	Singapore SE	Normal Trade
30-Jun-2016	11:15:44.609	23,900	15.8100	377,859	Singapore SE	Normal Trade
30-Jun-2016	11:15:15.018	20,800	15.8100	328,848	Singapore SE	Normal Trade
30-Jun-2016	11:11:47.218	30,000	15.8100	474,300	Singapore SE	Normal Trade
30-Jun-2016	11:04:23.038	17,700	15.8100	279,837	Singapore SE	Normal Trade
30-Jun-2016	11:03:53.299	25,900	15.8100	409,479	Singapore SE	Normal Trade
30-Jun-2016	11:00:13.670	12,600	15.8100	199,206	Singapore SE	Normal Trade
30-Jun-2016	11:00:08.981	13,000	15.8100	205,530	Singapore SE	Normal Trade
30-Jun-2016	10:48:42.382	15,000	15.8100	237,150	Singapore SE	Normal Trade
30-Jun-2016	10:44:10.943	13,600	15.8100	215,016	Singapore SE	Normal Trade
30-Jun-2016	10:43:25.149	13,000	15.8100	205,530	Singapore SE	Normal Trade
30-Jun-2016	10:40:55.717	12,700	15.8000	200,660	Singapore SE	Normal Trade
30-Jun-2016	10:37:12.265	16,900	15.8200	267,358	Singapore SE	Normal Trade
30-Jun-2016	10:28:16.907	20,000	15.8500	317,000	Singapore SE	Normal Trade
30-Jun-2016	10:28:16.888	13,400	15.8500	212,390	Singapore SE	Normal Trade

**DBSM.SI DBS GROUP HOLDINGS LTD** 15.800 SGD 0.270 1.74% Vol 8,172,100

Overview News & Research **Price & Charts** Estimates Financials Events Ownership Debt & Credit Peers & Valuation Derivatives Filings 360 Menu

**TIME AND SALES**

Display: Time and Sales Start: 30-Jun-2016 00:00 End: 11:21 30-Jun-2016 Now Price Limits: - Volume Range: - Update View

Showing 1 - 500 of 4190 Last event on this page: 30-Jun-2016, 10:52:34

Date	Local Time	Tick	Last Trade	Volume	Bid	Ask	Turnover
30-Jun-2016	11:20:07		15.800	200	15.800	15.810	3,160
30-Jun-2016	11:20:07		15.800	500	15.800	15.810	7,900
30-Jun-2016	11:20:07		15.800	300	15.800	15.810	4,740
30-Jun-2016	11:19:57		15.800	200	15.800	15.810	3,160
30-Jun-2016	11:19:57		15.800	400	15.800	15.810	6,320
30-Jun-2016	11:19:57		15.800	100	15.800	15.810	1,580
30-Jun-2016	11:19:57		15.800	300	15.800	15.810	4,740
30-Jun-2016	11:19:46		15.800	500	15.800	15.810	7,900
30-Jun-2016	11:19:46		15.800	100	15.800	15.810	1,580
30-Jun-2016	11:19:46		15.800	100	15.800	15.810	1,580
30-Jun-2016	11:19:46		15.800	300	15.800	15.810	4,740
30-Jun-2016	11:19:34		15.800	600	15.800	15.810	9,480
30-Jun-2016	11:19:34	▼	15.800	400	15.800	15.810	6,320
30-Jun-2016	11:19:32		15.810	200	15.800	15.810	3,162
30-Jun-2016	11:19:27	▲	15.810	100	15.800	15.810	1,581

### Index Movers <IMO>

The Index Movers application <IMO> provides fundamental, reference and real-time data in a customizable display for an index, its constituents, sectors and statistical data. The primary objective of this app is to highlight the stocks within a particular index that have the strongest impact on the index value.

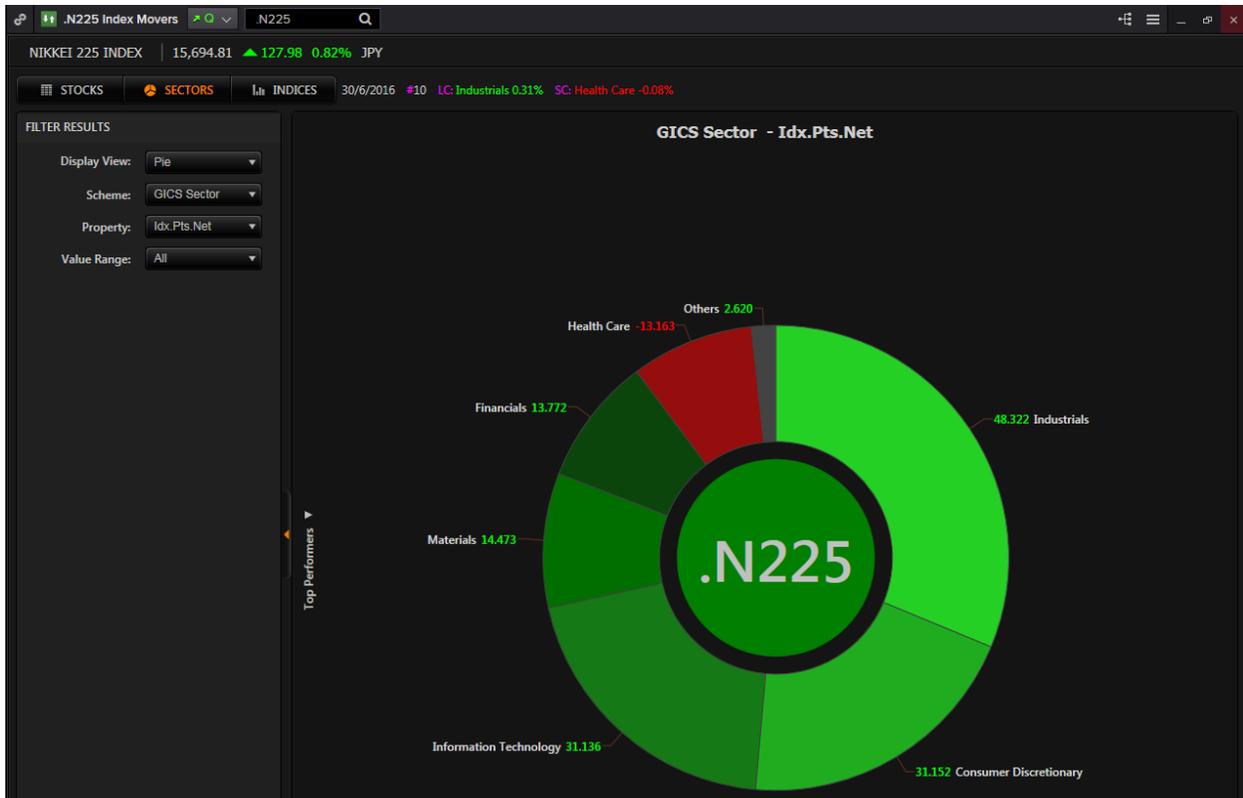
1. STOCKS: users can double-click on an individual stock to see all indices in which it is traded
2. INDICES: Users can double-click on an individual index to see all the companies whose stocks make up that index.

The same analysis can be performed on all indices in which a particular stock is traded worldwide, as well as a summary of the effect certain sectors within an index are having on a whole.

For example, an example of the Stocks, Sectors and Indices pages have been provided.

To arrive at this page, in the Eikon Toolbar, search <IMO>.

RIC	Name	Last	Pct.Chng	Pct.Chng.Bar	Net.Chng	Idx.Pts.Net	Idx.Pts.Pct	Sector
5101.T	YOKOHAMA RUBBER	1,292.000	2.220		28.000	0.554	0.004	Consumer Discretionary
6841.T	YOKOGAWA ELEC	1,167.000	3.090		35.000	1.381	0.009	Information Technology
6506.T	YASKAWA ELEC	1,337.000	-0.070		-1.000	-0.039	-0.000	Information Technology
9064.T	YAMATO HOLDINGS	2,319.500	0.870		20.000	0.787	0.005	Industrials
7951.T	YAMAHA CORP	2,767.000	-3.050		-87.000	-3.448	-0.022	Consumer Discretionary
4689.T	YAHOO JAPAN	452.000	-1.310		-6.000	-0.095	-0.001	Information Technology
9021.T	WEST JAPAN RY	6,436.000	-0.390		-25.000	-0.101	-0.001	Industrials
8270.T	UNY GROUP HLDG	858.000	0.000		0.000	0.000	0.000	Consumer Staples
3103.T	UNITIKA	55.000	-1.790		-1.000	-0.040	-0.000	Consumer Discretionary
4208.T	UBE INDUSTRIES	169.000	-1.170		-2.000	-0.079	-0.001	Materials
4704.T	TREND MICRO	3,655.000	3.100		110.000	4.339	0.028	Information Technology
8015.T	TOYOTA TSUSHO	2,204.000	1.750		38.000	1.495	0.010	Industrials
7203.T	TOYOTA MOTOR CO	5,160.000	0.800		41.000	1.610	0.010	Consumer Discretionary
3101.T	TOYOBO	196.000	1.550		3.000	0.118	0.001	Materials
5901.T	TOYO SEIKAN HLDG	1,951.000	0.360		7.000	0.273	0.002	Materials
5332.T	TOTO	4,055.000	1.760		70.000	1.383	0.009	Industrials
4042.T	TOSOH CORP	471.000	1.070		5.000	0.196	0.001	Materials
6502.T	TOSHIBA CORP	276.400	-0.290		-0.800	-0.032	-0.000	Industrials
3402.T	TORAY INDUSTRIES	878.200	-0.250		-2.200	-0.089	-0.001	Materials
7911.T	TOPPAN PRINTING	882.000	-0.900		-8.000	-0.318	-0.002	Industrials
3289.T	TOKYU FUDOSAN HD	639.000	1.590		10.000	0.394	0.003	Financials
9005.T	TOKYU CORP	892.000	0.340		3.000	0.118	0.001	Industrials
8804.T	TOKYO TATEMONO	1,237.000	1.980		24.000	0.474	0.003	Financials
9531.T	TOKYO GAS	420.400	0.450		1.900	0.074	0.000	Utilities
8035.T	TOKYO ELECTRON	8,669.000	2.870		242.000	9.549	0.061	Information Technology
9501.T	TOKYO ELE PWR HD	425.000	1.430		6.000	0.024	0.000	Utilities
9681.T	TOKYO DOME CORP	459.000	2.910		13.000	0.512	0.003	Consumer Discretionary
4043.T	TOKUYAMA	281.000	0.360		1.000	0.039	0.000	Materials
8766.T	TOKYO MARINE HLD	3,398.000	1.280		43.000	0.846	0.005	Financials
5301.T	TOKAI CARBON	256.000	1.590		4.000	0.158	0.001	Materials
5707.T	TOHO ZINC	304.000	1.000		3.000	0.118	0.001	Materials
9602.T	TOHO	2,832.000	0.390		11.000	0.043	0.000	Consumer Discretionary
9001.T	TOBU RAILWAY	559.000	0.000		0.000	0.000	0.000	Industrials
4543.T	TERUMO CORP	4,390.000	-0.110		-5.000	-0.398	-0.003	Health Care
3401.T	TEIJIN	344.000	-2.270		-8.000	-0.317	-0.002	Materials
6762.T	TDK CORPORATION	5,720.000	0.700		40.000	1.562	0.010	Information Technology
4502.T	TAKEDA PHARM	4,450.000	0.230		10.000	0.396	0.003	Health Care
8233.T	TAKASHIMAYA	740.000	3.790		27.000	1.067	0.007	Consumer Discretionary
2531.T	TAKARA HOLDINGS	938.000	1.520		14.000	0.554	0.004	Consumer Staples
6976.T	TAIYO YUDEN	896.000	1.820		16.000	0.632	0.004	Information Technology
1801.T	TAISEI CORP	844.000	0.720		6.000	0.237	0.002	Industrials
5233.T	TAIHEIYO CEMENT	246.000	4.240		10.000	0.395	0.003	Materials
8795.T	T&D HOLDINGS	869.600	1.100		9.500	0.075	0.000	Financials
7269.T	SUZUKI MOTOR	2,791.000	2.880		78.000	3.085	0.020	Consumer Discretionary
8830.T	SUMITOMO RE&DEV	2,763.500	1.920		52.000	2.054	0.013	Financials
5232.T	SUMITOMO OSAKA	439.000	0.000		0.000	0.000	0.000	Materials
5713.T	SUMITOMO MTL_MIN	1,037.000	1.020		10.500	0.412	0.003	Materials
8309.T	SUMITOMO MITSUI	331.200	1.810		5.900	0.232	0.001	Financials
6302.T	SUMITOMO HWY IND	450.000	2.040		9.000	0.355	0.002	Industrials
5802.T	SUMITOMO ELEC	1,358.500	0.260		3.500	0.137	0.001	Consumer Discretionary



On the Sectors pie chart, search for an equity index and double-click on any section to delve deeper into the sector, (e.g. components of Industrials).

The screenshot shows the 'C Index Movers' page with a table of indices. The table provides detailed information for each index, including its RIC, current price (Last), change in price (Net.Chng), percentage change (Pct.Chng), and its contribution to the index (Idx.Pts.Net, Idx.Pts.Pct, Rel.Pct.Chng, Wght.Pct, Live.Wght.Pct).

Index	RIC	Last	Net.Chng	Pct.Chng	Idx.Pts.Net	Idx.Pts.Pct	Rel.Pct.Chng	Wght.Pct	Live.Wght.Pct
Dow Jones Global Titans 50 Index	.DJGTE	282.480	-0.450	-0.160	--	--	--	--	--
Dow Jones Global Titans Index	.DJGT	234.390	-0.230	-0.100	--	--	--	--	--
Dow Jones U.S. Financials Index	.DJUSEF	421.420	9.060	2.200	--	--	--	--	--
NYSE Arca Institutional Index	.XII	N/A	N/A	N/A	--	--	--	NP	--
NYSE Composite Index	.NYA	N/A	N/A	N/A	--	--	--	NP	--
S&P 100 Index	.OEXA	916.820	14.460	1.600	--	--	--	NP	--
S&P 500 Banks (Industry)	.SPLRCBKS	289.380	7.570	2.600	--	--	--	NP	--
S&P 500 Banks Index (Industry Group)	.SPXBK	202.550	5.300	2.600	--	--	--	NP	--
S&P 500 Diversified Banks (Sub Ind)	.SPLRCBANK	347.830	9.600	2.840	--	--	--	NP	--
S&P 500 Financial (Sector)	.SPSY	303.630	6.860	2.310	--	--	--	NP	--
S&P 500 Index	.SPX	2,070.770	34.680	1.700	--	--	--	NP	--
S&P 500 Value Index	.IVX	904.100	16.240	1.830	--	--	--	NP	--
S&P 900 Index	.SPLGMID	4,724.170	79.380	1.710	--	--	--	NP	--
S&P Composite 1500 Banks (Industry Group)	.SPCOMBK	216.690	5.710	2.700	--	--	--	NP	--
S&P Composite 1500 Banks (Industry)	.SPCOMBKS	301.890	8.000	2.720	--	--	--	NP	--
S&P Composite 1500 Diversified Banks (Sub Ind)	.SPCOMRBANK	363.170	10.030	2.840	--	--	--	NP	--
S&P Composite 1500 Financials (Sector)	.SPCOMF	338.060	7.440	2.250	--	--	--	NP	--
S&P Composite 1500 Index	.SPSUP	478.630	8.100	1.720	--	--	--	NP	--
STOXX Global 150 EUR Price Index	.SX150P	3,254.660	-5.670	-0.170	--	--	--	NP	--
Thomson Reuters Americas Index	.TRXFLDAAPU	102.050	1.820	1.820	--	--	--	--	--
Thomson Reuters Americas Total Return Local Currency Index	.TRXFLDAATL	199.580	3.450	1.760	--	--	--	--	--
Thomson Reuters CRI US Large Cap Environmental Index (EUR)	.TRENVUSE1	1,843.150	0.330	0.020	--	--	--	--	--
Thomson Reuters CRI US Large Cap Environmental Index (USD)	.TRENVUS1	1,404.780	0.000	0.000	0.000	0.000	--	--	--
Thomson Reuters CRI US Large Cap ESG Index (EUR)	.TRESGUSE1	1,851.760	0.330	0.020	--	--	--	--	--
Thomson Reuters CRI US Large Cap ESG Index (USD)	.TRESGUS1	1,411.380	0.000	0.000	0.000	0.000	--	--	--

On the Indices page, search for a stock in order to view on which indexes it is included in as well as the impact it had on the price of that equity index.

## Signal <SIGNAL>

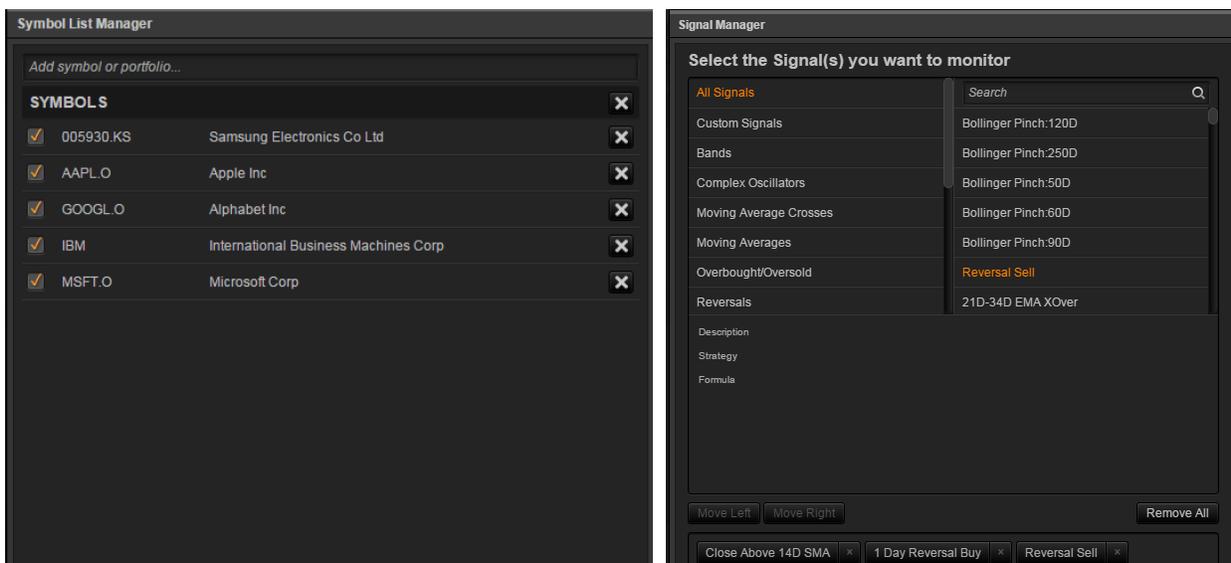
Signal monitors a list of securities real-time against one or more technical criteria and immediately alerts you in the signal panel when a security meets one or more of the conditions.

In the Eikon toolbar, search <SIGNAL> to open the application.



After opening the application, there are certain steps you have to take in order to set up your signal application.

1. Click the icon next to the “Add symbol or portfolio” option in order to customise which Portfolios, Chain RICs or Individual RICs you are interested in.
2. Click the icon next to the and the “Add signal” option in order to customise the type of signal you want to monitor.



### Aggregate <AGGR>

Aggregate gives users access to the Aggregates matrix which provides a useful way to analyze a metric across both sectors/industries and regions/countries at a glance.

In order to utilize this application,

1. In the Eikon Toolbar, search <AGGR>

2. In the leftmost column adjust the following parameters

- All active equities
- Geography
- Business Classification
- Market Cap
- Layout of the report

3. After pressing update. You could sort the rows by the different parameters you have selected. (E.g. here, we have sorted it by the Price to Cash Flow Per Share from the lowest value to the highest value)

The screenshot shows the 'Aggregates Report' window with the following settings: Universe: All Active Equities, Geography: Countries (Singapore), Business Classification: All, Market Cap: All. The table displays metrics for 28 industry groups, sorted by Price to Cash Flow Per Share (Daily Time Series Ratio) in ascending order. The metrics include P/E, Enterprise Value to EBITDA, Enterprise Value to Sales, Price to Cash Flow Per Share, Price to Book Value Per Share, and Dividend Yield, Percent, LFY.

Industry Group	P/E (Daily Time Series Ratio)	Enterprise Value To EBITDA (Daily Time Series Ratio)	Enterprise Value To Sales (Daily Time Series Ratio)	Price To Cash Flow Per Share (Daily Time Series Ratio)	Price To Book Value Per Share (Daily Time Series Ratio)	Dividend Yield, Percent, LFY
All	16.61	13.55	2.19	15.62	1.18	3.59%
Insurance (3)	15.06	7.14	6.23	4.09	1.50	2.62%
Diversified Financials (16)	17.40	11.50	5.26	6.43	1.85	3.93%
Energy (28)		12.83	1.00	6.51	0.88	7.62%
Technology Hardware & Equipment (15)	16.54	7.55	0.36	6.90	1.69	5.47%
Transportation (20)	23.75	10.94	1.29	7.12	1.28	4.46%
Household & Personal Products (2)	21.84	5.51	0.53	7.15	1.26	2.90%
Materials (16)	29.27	11.21	1.10	7.39	0.79	3.17%
Retailing (19)	15.43	8.79	1.13	7.42	1.54	3.68%
Real Estate (72)	11.04	20.59	7.00	8.88	0.78	4.40%
Consumer Services (20)	29.70	12.86	3.59	9.66	0.77	2.59%
Food, Beverage & Tobacco (17)	19.67	12.07	0.82	10.34	1.09	2.39%
Telecommunication Services (4)	16.19	13.37	3.98	12.88	2.73	4.69%
Utilities (4)	26.14	13.58	3.66	13.48	0.89	3.43%
Automobiles & Components (1)	16.06	10.72	2.74	13.68	3.90	2.42%
Commercial & Professional Services (20)	29.52	12.31	1.44	16.07	1.81	3.15%
Software & Services (7)	17.58	10.83	2.57	16.43	3.10	6.61%
Consumer Durables & Apparel (1)	108.37	26.74	0.67	22.63		1.75
Pharmaceuticals, Biotechnology & Life Sci...	12.63	868.35	3.36	25.41	1.08	2.34%
Semiconductors & Semiconductor Equipm...		28.71	7.90	25.56	2.90	0.73%
Health Care Equipment & Services (13)	46.60	23.62	5.23	30.59	2.67	2.17%
Media (4)	18.27	14.86	6.34	36.05	1.55	14.20%
Capital Goods (50)	20.36	17.07	1.37		1.02	6.34%
Food & Staples Retailing (5)	122.66	16.67	0.84		1.23	2.89%
Banks (3)	9.39	7.33	3.83		0.96	2.98%

## Monitor Application <MON>

In Eikon, users are able to utilise the Monitor application in order to track different instruments such as single RICs, equity indexes etc. Here you can specify the different columns you wish to view as well as to choose which specific instruments you are interested in.

RIC	Name		Last	Net Chng	Pct.Chng	Company Market Cap	GICS Sector Name	+
CACT.SI	CAPITALAND TRUST		1.480	+0.025	1.72 %	4284934342.67377	Financials	
III CATL.SI	CAPITALAND		3.060	+0.050	1.66 %	12816443782.3915	Financials	
III CMDG.SI	COMFORTDELGRO	▲	2.750	+0.060	2.23 %	5776736665.61129	Industrials	
III CMLT.SI	CAPITALAND MALL		2.160	-0.020	-0.92 %	7692552953.03049	Financials	
III CTDI.SI	CITY DEVT LTD		8.200			7427612018.63863	Financials	
III DBSM.SI	DBS GRP HLDGS		15.800	+0.270	1.74 %	39162796630.3072	Financials	
III GAGR.SI	GOLDEN AGRI		0.350	+0.015	4.48 %	4284049082.18538	Consumer Staples	
III GENS.SI	GENTING SPORE		0.730	+0.025	3.55 %	8493517307.44836	Consumer Discretionary	
III GLPL.SI	GLOBAL LOG PROP		1.795	+0.015	0.84 %	8589826888.34883	Financials	
HKLD.SI	HONGKONG LAND	▼	6.060	+0.070	1.17 %	14093312612.2	Financials	
III HPHT.SI	HUTCHISON PORT		0.450	+0.015	3.45 %	3789328944.57	Industrials	
III JCYC.SI	JARDINE C&C	▼	36.480	+0.980	2.76 %	13976959168.8113	Consumer Discretionary	
III KPLM.SI	KEPPEL CORP		5.480	+0.070	1.29 %	9797092721.75346	Industrials	
III OCBC.SI	OCBC		8.650	+0.160	1.88 %	35467911997.0088	Financials	
III SATS.SI	SATS LTD		4.130	+0.030	0.73 %	4590917016.37353	Industrials	
III SCIL.SI	SEMBCORP INDUST		2.840	+0.030	1.07 %	5003702712.95002	Industrials	
III SCMN.SI	SEMBCORP MARINE		1.560	+0.015	0.97 %	3216269628.67546	Industrials	
III SGXL.SI	SGX		7.640	+0.190	2.55 %	7953049630.77537	Financials	
III SIAE.SI	SIA ENGR		3.700	+0.020	0.54 %	4118790306.75292	Industrials	
III SIAL.SI	SIA LTD		10.680	+0.140	1.33 %	12597821972.6097	Industrials	
III SPRM.SI	SPORE PRESS HLDG		3.950	+0.100	2.60 %	6138812963.58271	Consumer Discretionary	
III STAR.SI	STARHUB		3.790	+0.040	1.07 %	6468224623.64486	Telecommunication Services	
III STEG.SI	ST ENGRG	▲	3.140	+0.050	1.62 %	9611425191.01221	Industrials	
III STEL.SI	SINGTEL		4.130	+0.090	2.23 %	64164167342.7452	Telecommunication Services	
III TBEV.SI	THAI BEVERAGE		0.910			22762273464.4098	Consumer Staples	
III UOBH.SI	UOB LTD		18.380	+0.420	2.34 %	28975676711.0947	Financials	
III UTOS.SI	UOL LTD		5.450	+0.080	1.49 %	4311373325.47923	Financials	
III WLIL.SI	WILMAR INTL	▼	3.270	+0.040	1.24 %	20603488547.488	Consumer Staples	
III YAZG.SI	YANGZIJANG		0.895	+0.005	0.56 %	3401872657.90598	Industrials	

1. In the Eikon toolbar, search <MON> to open the Monitor application.
2. By default, the RIC, Name, Last Price, Net and Percentage change columns will be displayed. However, you are able to specify any other information available to be displayed.

You are also able to change the format of %Change column into that of a bar for better visual representation, sort by GICS sector and to add headers to separate sectors.

## Social Media Monitor <SOCIAL>

The Social Media Monitor <SOCIAL> utilises text mining in order to view what is trending in the markets from a social perspective over the last few days.

You are able to choose different instruments by searching in the in-app search bar as well as choose between a sentiment line or bar chart for you visually view the positivity or negativity about a certain company in the social media network. This would give you an idea about the market sentiment with regards to a certain company and hence can help predict possible stock price movements.



1. In the Eikon Toolbar, search <SOCIAL> to open the social monitor application
2. Select the different instruments and click on the symbol to display it on the sentiment line or bar chart.
3. The leftmost column would display the latest tweets and posts about the company of interest.

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## Part 8: Introduction to Eikon Excel

# 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

## Chapter 8: 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> <b>Relative Periods</b>                      FY[n] Fiscal Year                      FQ[n] Fiscal Quarter                      FI[n] Fiscal Interim                      FS[n] Fiscal Semi-Annual                      CY[n] Calendar Year                 </td> <td>                     } (Replace n with 0 for last reported period, -1 for previous period and 1 for next period)                 </td> <td> <b>Period Argument Codes</b>                      FY0 Last Fiscal Year                      FY1 Next Fiscal Year                      FY-1 Previous Fiscal Year                      FQ0 Last Fiscal Quarter                      FI Fiscal Interim                      FS Fiscal Semi-Annual                      CY Calendar Year                      LTM Last Twelve Months                      NTM Next Twelve Months                 </td> </tr> <tr> <td> <b>Absolute Periods</b>                      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                 </td> <td></td> <td></td> </tr> </table>			<b>Relative Periods</b> FY[n] Fiscal Year FQ[n] Fiscal Quarter FI[n] Fiscal Interim FS[n] Fiscal Semi-Annual CY[n] Calendar Year	} (Replace n with 0 for last reported period, -1 for previous period and 1 for next period)	<b>Period Argument Codes</b> FY0 Last Fiscal Year FY1 Next Fiscal Year FY-1 Previous Fiscal Year FQ0 Last Fiscal Quarter FI Fiscal Interim FS Fiscal Semi-Annual CY Calendar Year LTM Last Twelve Months NTM Next Twelve Months	<b>Absolute Periods</b> 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	
<b>Relative Periods</b> FY[n] Fiscal Year FQ[n] Fiscal Quarter FI[n] Fiscal Interim FS[n] Fiscal Semi-Annual CY[n] Calendar Year	} (Replace n with 0 for last reported period, -1 for previous period and 1 for next period)	<b>Period Argument Codes</b> FY0 Last Fiscal Year FY1 Next Fiscal Year FY-1 Previous Fiscal Year FQ0 Last Fiscal Quarter FI Fiscal Interim FS Fiscal Semi-Annual CY Calendar Year LTM Last Twelve Months NTM Next Twelve Months					
<b>Absolute Periods</b> 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							
		<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>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>		<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					

## 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.

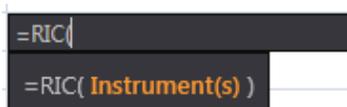
## How to Generate a Basic Table <=RIC> and <=DI>

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.

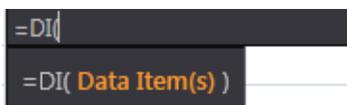
1. In Cell A2, (A3, A4 etc), enter the list of RICs (Reuters Instrument Code) you require.

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")
```

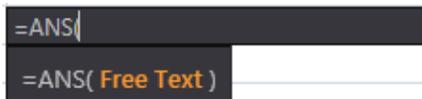
Updated at 16:38:09	Total Revenue	Company Market Cap	Basic Normalized EPS
GOOG.O	66001000000	5.28448E+11	20.59118
GOOG.O	66001000000	5.16205E+11	20.59118
GOOG.O	66001000000	5.17176E+11	20.59118
GOOG.O	66001000000	5.16782E+11	20.59118
GOOG.O	66001000000	5.04557E+11	20.59118
GOOG.O	66001000000	4.96985E+11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

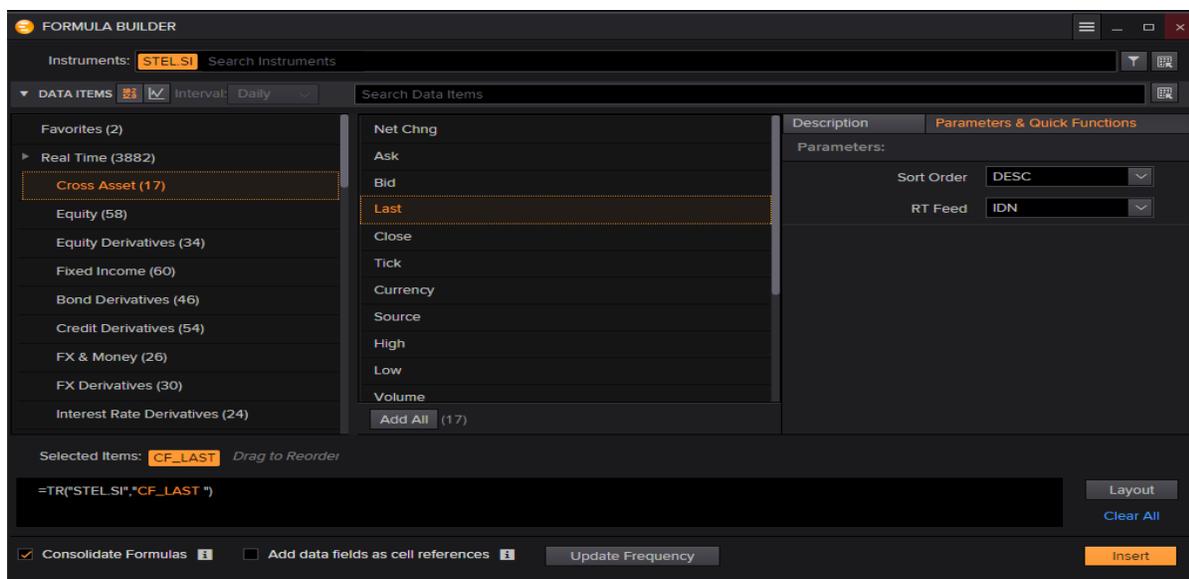
3. This would automatically correct into a function and display the results in a table, with an underlying active formula as shown below.

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.



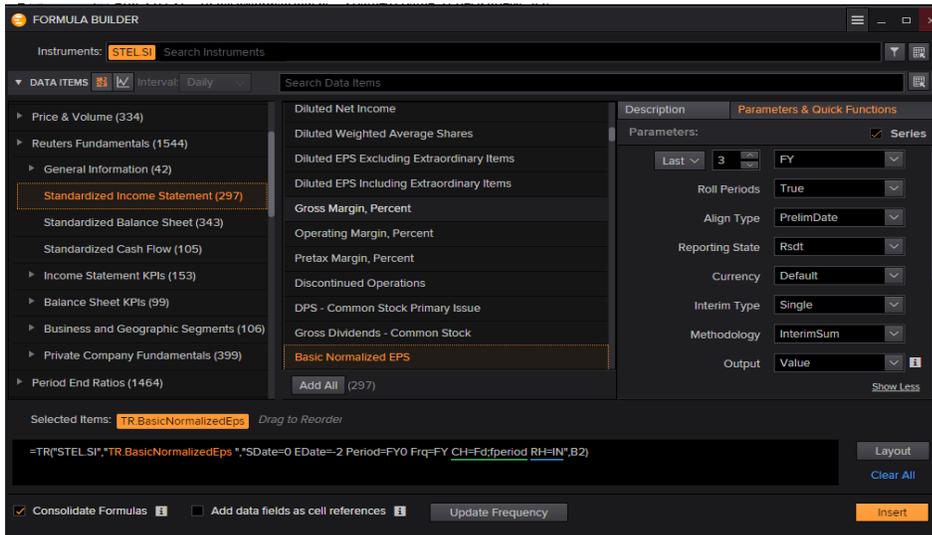
Alternatively, enter the following <=TR("RIC", "CF\_LAST")> for the figure.

## 2. Formula Builder

### Method 1: Formula Builder manually

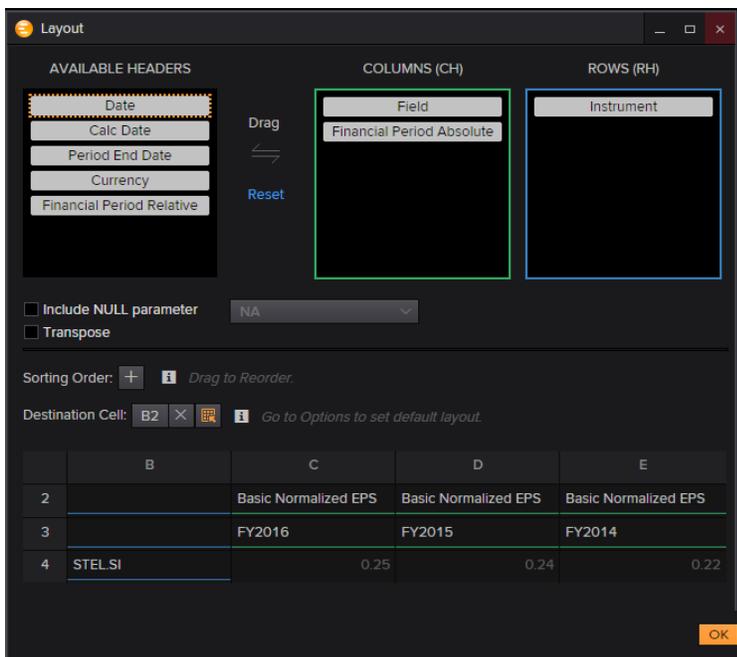
In order to enter data manually, you should do the following:

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

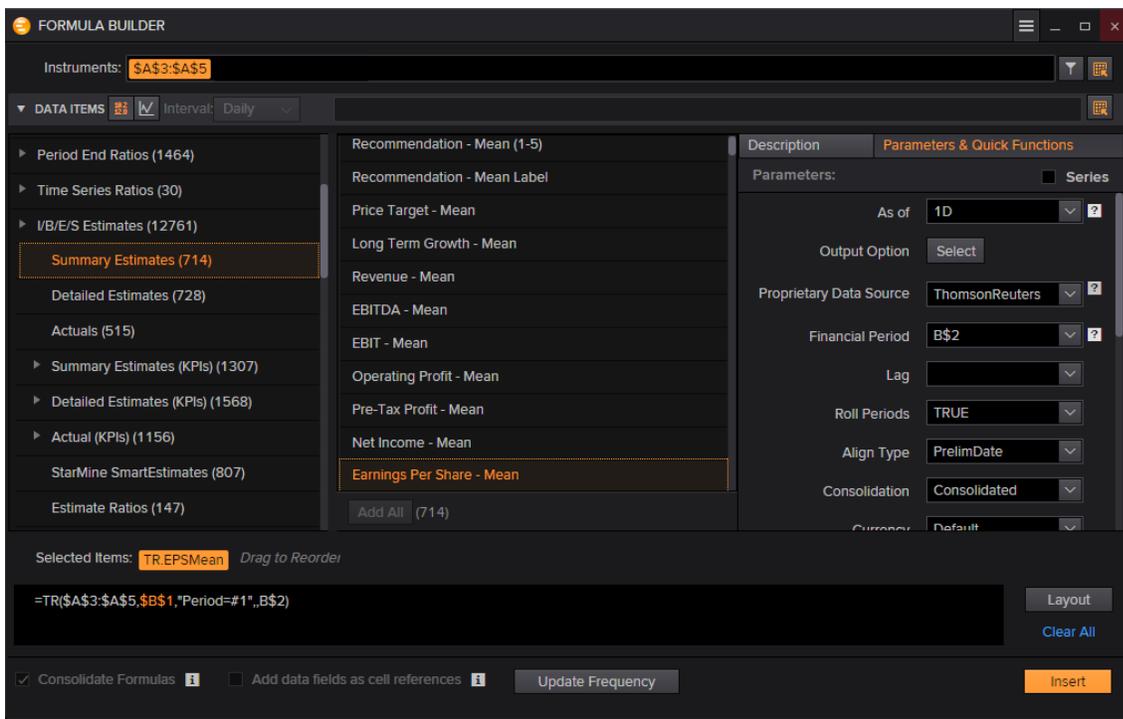
	TR.EPSMean		
	FY2015	FY2016	FY2017
STEL.SI			
DBSM.SI			
STAR.SI			

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”

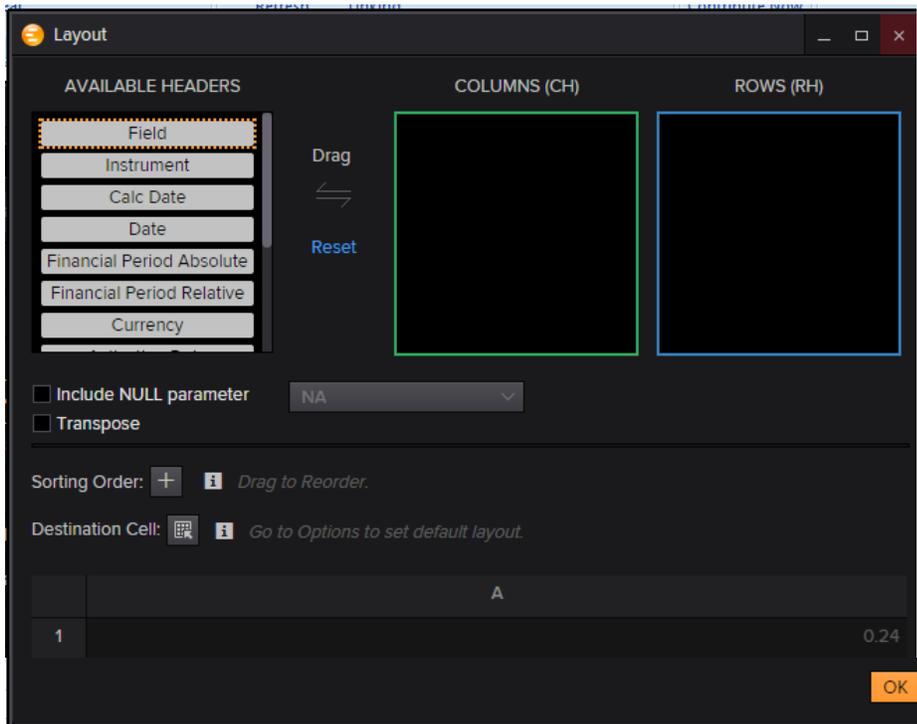
Note: the year has to be typed with no space in between FY and 2015

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 interface. The window title is "FORMULA BUILDER". The "Instruments" field contains "\$A\$3:\$A\$5". The "DATA ITEMS" section is expanded to show "Summary Estimates (714)". The "Earnings Per Share - Mean" item is selected. The "Parameters & Quick Functions" tab is active, showing "Financial Period" set to "B\$2". The formula bar displays "=TR(\$A\$3:\$A\$5,\$B\$1,\"Period=#1\",B\$2)". The "Insert" button is 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).

The screenshot shows the 'Excel Screener' application window. The left sidebar contains the following sections:

- SCREEN**: Restored Screen (dropdown), Currency: USD (dropdown).
- UNIVERSE**: Public Companies (dropdown), Include: Active, Public, Primary (Edit), Include: Indices, Lists, Portfolios, Screens (Edit), Exclude: None (Edit).
- QUICK FILTERS**: Country of Headquarters (Add), Country of Incorporation (Add), Average Daily Value Traded - 52 Weeks (Add), TRBC Economic Sector Name (Add), TRBC Industry Name (Add).
- Add Filter**: Country of Exchange (Include SG), AND, Company Market Cap (Greater Than or Equal (>=) 10,000,000.00 USD).

The main area on the right contains a message: "Please use the left panel to define your screening criteria" and a list of instructions:

- Click on the screen name dropdown on the top left of the app to load a sample or a previously saved screen
- Use the Universe section to define the content you want to screen on
- Use the Quick Filters or type in the Add Filter box to build screening criteria
- Learn More [here](#).

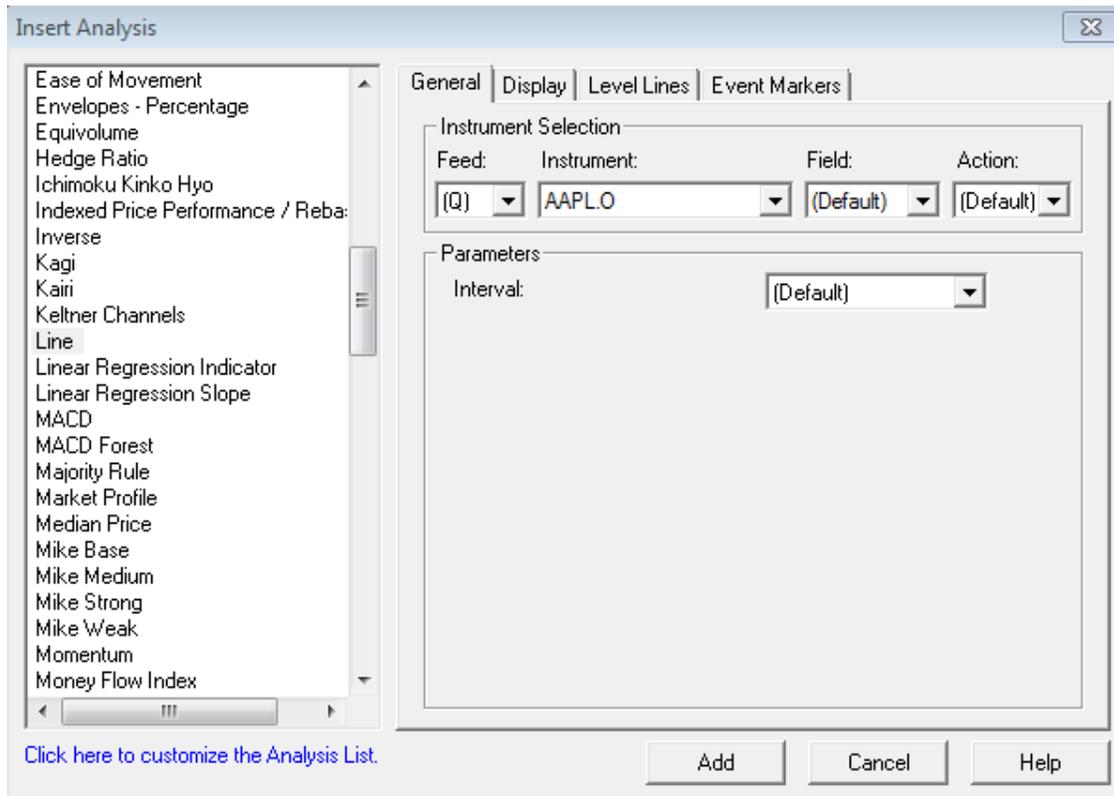
Generate a table that will look like the following by pressing “Insert Screen”

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

GB00BH4HKS39

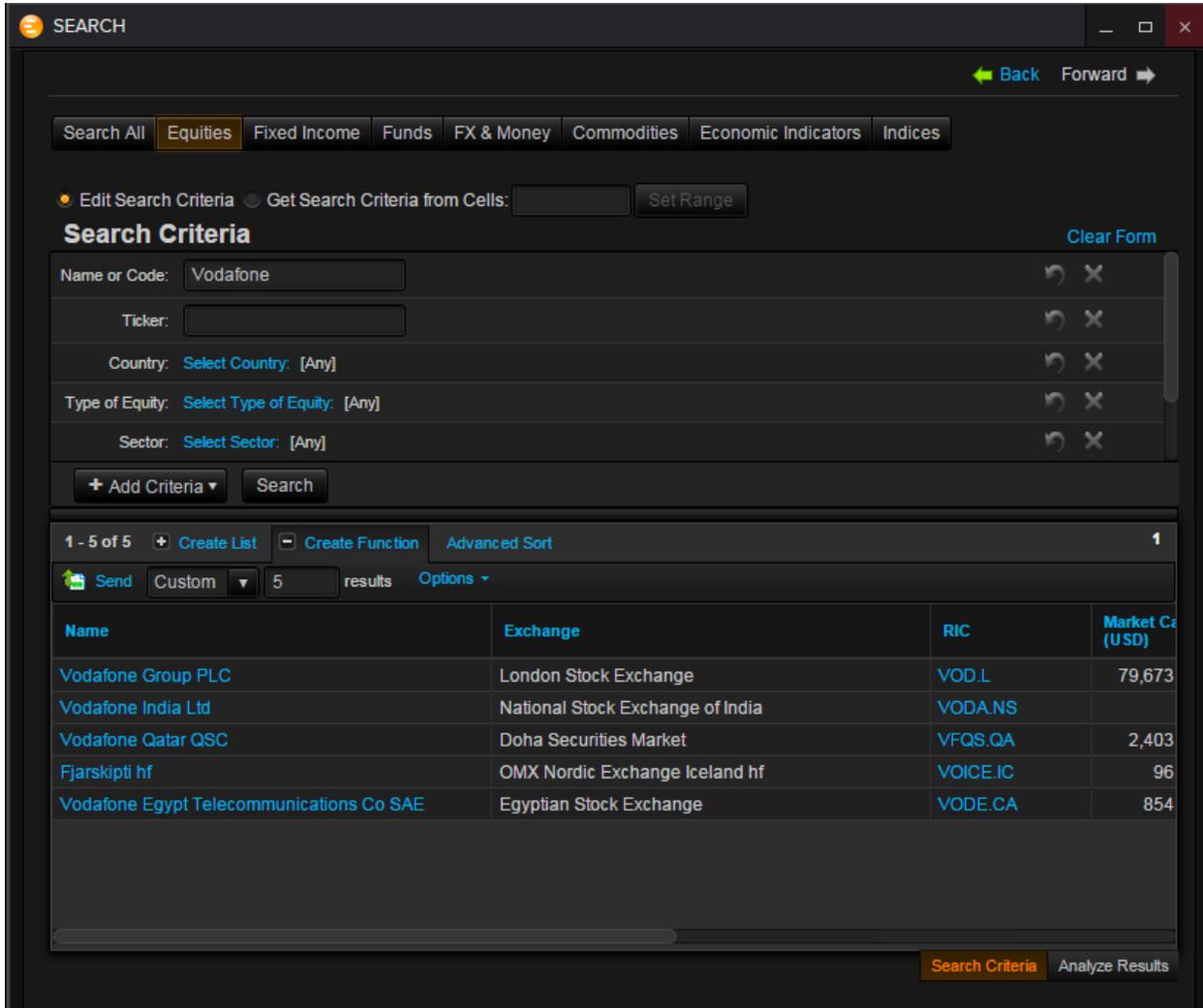
US4592001014

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

Updated at 10:07:23		
		Lipper RIC
	US04315J2096	LP40050069

## 6. Rsearch Functions

Within Eikon Excel, one is able to conduct an advanced search to find specific equities, bonds etc. Here, we would demonstrate how to obtain the RIC of a company.



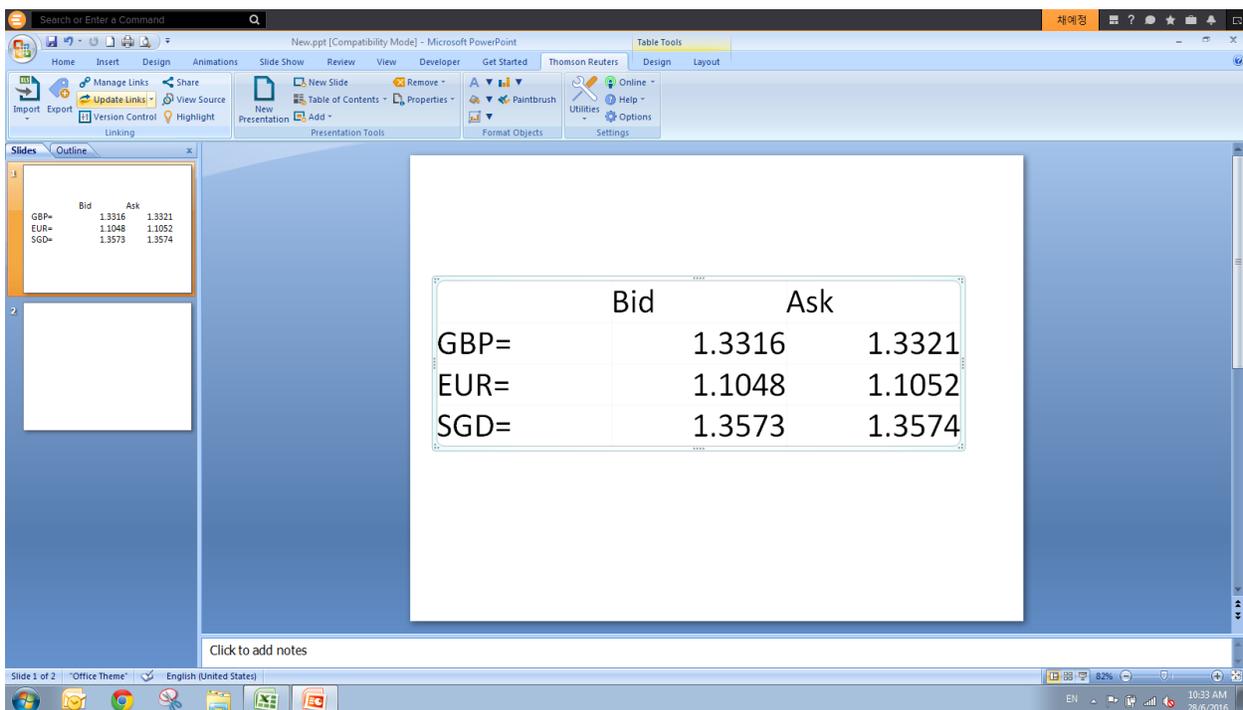
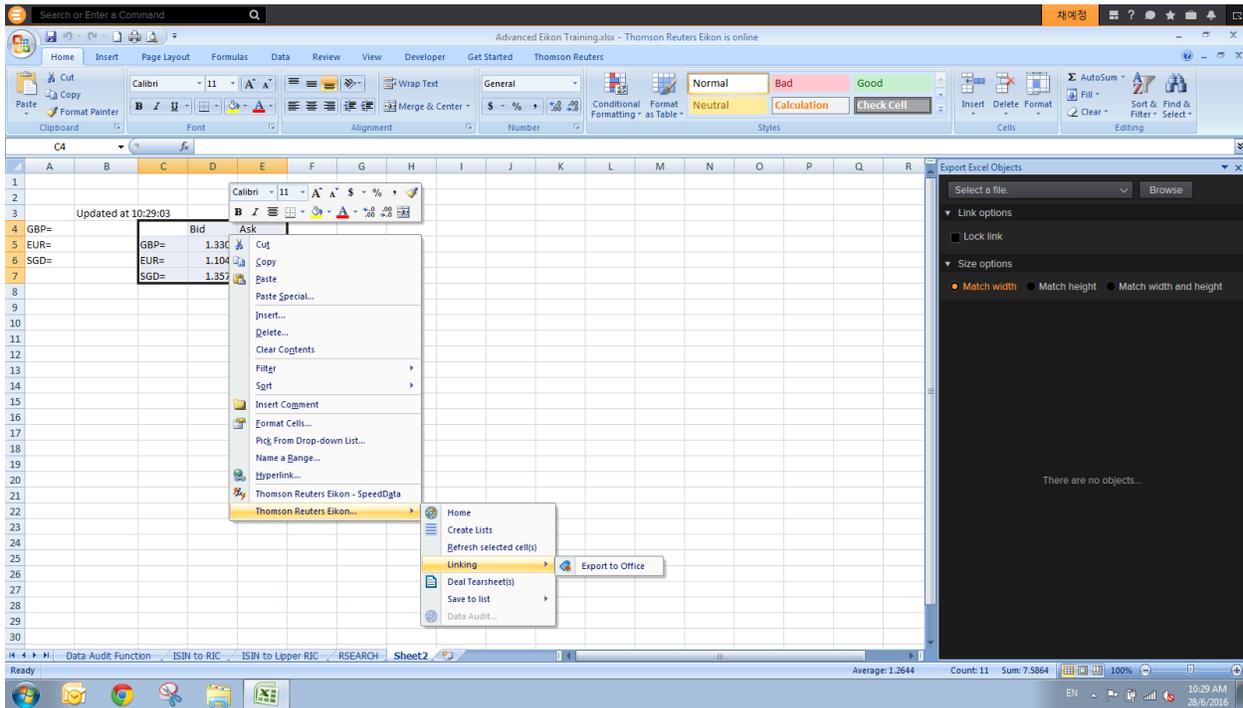
The screenshot displays the Eikon RSearch interface. At the top, there are navigation buttons for 'Back' and 'Forward'. Below that, a search category menu is visible with 'Equities' selected. The search criteria section includes fields for 'Name or Code' (Vodafone), 'Ticker', 'Country' (Select Country: [Any]), 'Type of Equity' (Select Type of Equity: [Any]), and 'Sector' (Select Sector: [Any]). A 'Search' button is present. Below the search criteria, there are options for '1 - 5 of 5', 'Create List', 'Create Function', and 'Advanced Sort'. The results are displayed in a table with columns for Name, Exchange, RIC, and Market Cap (USD).

Name	Exchange	RIC	Market Cap (USD)
Vodafone Group PLC	London Stock Exchange	VOD.L	79,673
Vodafone India Ltd	National Stock Exchange of India	VODA.NS	
Vodafone Qatar QSC	Doha Securities Market	VFQS.QA	2,403
FjarSKIPI hf	OMX Nordic Exchange Iceland hf	VOICE.IC	96
Vodafone Egypt Telecommunications Co SAE	Egyptian Stock Exchange	VODE.CA	854

At the bottom right of the interface, there are buttons for 'Search Criteria' and 'Analyze Results'.

## 7. Linking to PowerPoint

Updated at 10:07:22			
		Bid	Ask
	GBP=	1.3339	1.3343
	EUR=	1.1102	1.1106
	SGD=	1.3464	1.3467



## 8. Historical Price Retrieval

The screenshot shows the Eikon Formula Builder interface. At the top, the instrument is set to STEL.SI. The data items are filtered to 'price' with a daily interval. The 'Price Close' item is selected, and its parameters are configured as follows:

- Start - End: From -1Y, To 0D
- Frequency: W
- Scale: 0
- Currency: Default
- Lag: (empty)
- Output: Value

The formula generated is: `=TR("STEL.SI","TR.PriceClose",SDate=-1Y EDate=0D Frq=W CH=Fd RH=IN",B2)`

At the bottom, there are checkboxes for 'Consolidate Formulas' (checked) and 'Add data fields as cell references' (unchecked), along with 'Update Frequency' and 'Insert' buttons.

Pull up price for singtel for the past year

1. Formula Builder
2. Series
3. Start-end
4. -1Y (one year ago) FROM
5. 0D (latest trading day) TO
6. Interval (e.g. W)
7. Layout show date/calc date

CALC DATE: DATE REGARDLESS WHETHER IT IS TRADED THAT DAY (1W interval regardless of Public Holiday)

DATE: DATE THAT THE VALUE WAS TRADED

Layout

AVAILABLE HEADERS

- Instrument
- Currency
- Description
- Name
- Display Name

Drag

Reset

COLUMNS (CH)

- Field

ROWS (RH)

- Date
- Calc Date

Include NULL parameter

Transpose

NA

Sorting Order: + Drag to Reorder.

Destination Cell: B2

Go to Options to set default layout.

	B	C	D
2			Price Close
3	07/03/2015	07/03/2015	4.25
4	07/10/2015	07/10/2015	4.29
5	07/16/2015	07/17/2015	4.32
6	07/24/2015	07/24/2015	4.34
7	07/31/2015	07/31/2015	4.09
...			
54	06/24/2016	06/24/2016	3.82

OK

Formula: =TR("STEL.SI", "TR.PriceClose", "SDate=-1Y EDate=0D Frq=W CH=Fd RH=date;calcdte")		
		Price Close
3/7/2015	3/7/2015	4.25
10/7/2015	10/7/2015	4.29
16/7/2015	17/7/2015	4.32
24/7/2015	24/7/2015	4.34
31/7/2015	31/7/2015	4.09
6/8/2015	7/8/2015	4.06
14/8/2015	14/8/2015	4.06
21/8/2015	21/8/2015	3.94
28/8/2015	28/8/2015	3.8
4/9/2015	4/9/2015	3.69
10/9/2015	11/9/2015	3.72
18/9/2015	18/9/2015	3.8
25/9/2015	25/9/2015	3.64
2/10/2015	2/10/2015	3.56
9/10/2015	9/10/2015	3.85
16/10/2015	16/10/2015	3.94
23/10/2015	23/10/2015	4.02
30/10/2015	30/10/2015	3.98
6/11/2015	6/11/2015	3.92
13/11/2015	13/11/2015	3.86
20/11/2015	20/11/2015	3.89
27/11/2015	27/11/2015	3.8
4/12/2015	4/12/2015	3.82
11/12/2015	11/12/2015	3.84
18/12/2015	18/12/2015	3.76
24/12/2015	25/12/2015	3.66
31/12/2015	1/1/2016	3.67
8/1/2016	8/1/2016	3.55
15/1/2016	15/1/2016	3.56
22/1/2016	22/1/2016	3.46
29/1/2016	29/1/2016	3.51

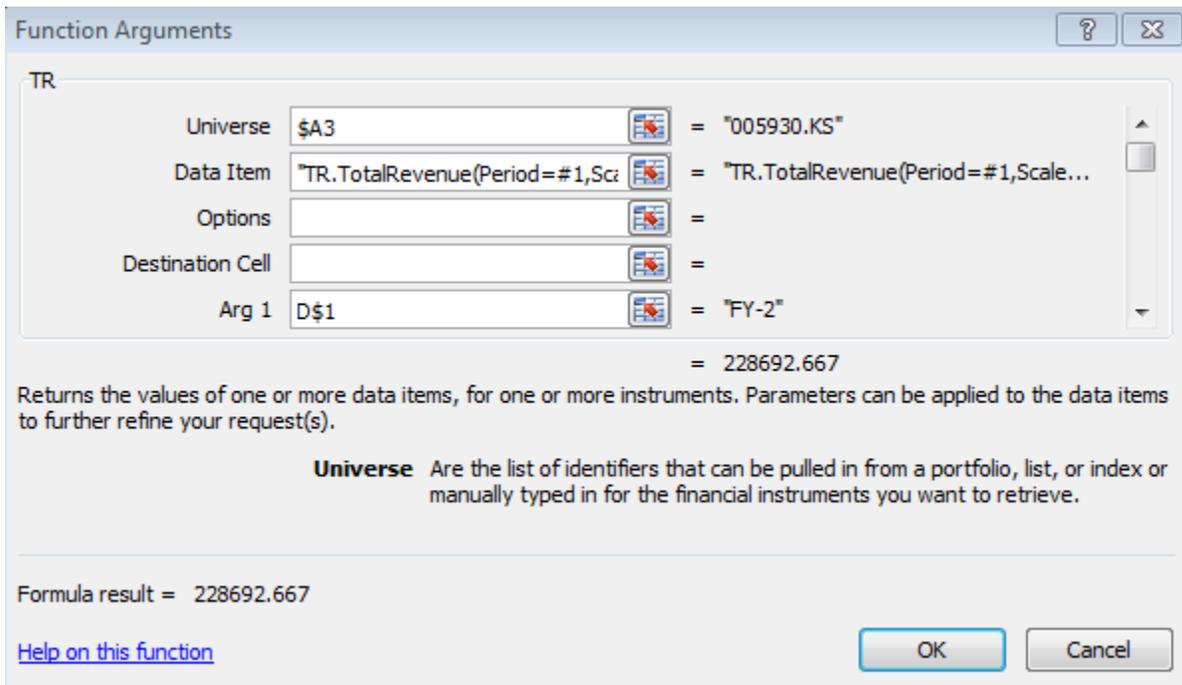
## 9. Retrieval (different fiscal year end)

The screenshot displays the Eikon Formula Builder interface. At the top, the window title is "FORMULA BUILDER". Below it, the "Instruments" field contains "7203.T" and "005930.KS". The "DATA ITEMS" section on the left lists various categories, with "Standardized Income Statement (297)" selected. The central pane shows a list of data items under "Total Revenue", including "Bank Total Revenue", "Normalized EBITDA", "Normalized EBIT", "Normalized Income Avail to Cmn Shareholders", "Normalized Income After Taxes", "Normalized Income Before Taxes", "Income Avail to Cmn Shareholders Incl Extra", "Income Avail to Cmn Shareholders Excl Extra", "Net Income Incl Extra Before Distributions", and "Net Income Before Extraordinary Items". An "Add All (297)" button is at the bottom of this list. The right-hand pane, titled "Parameters & Quick Functions", shows the "Parameters" section with a checked "Series" option. The parameters are: "Last" (dropdown), "5" (spin box), "FY" (dropdown), "Scale" (dropdown set to "6"), "Roll Periods" (dropdown set to "True"), "Align Type" (dropdown set to "PrelimDate"), "Reporting State" (dropdown set to "Rsdtd"), "Currency" (dropdown set to "Default"), "Interim Type" (dropdown set to "Single"), "Methodology" (dropdown set to "InterimSum"), and "Output" (dropdown set to "Value"). Below the parameters, the "Selected Items" section shows "TR.TotalRevenue" with a "Drag to Reorder" option. The formula bar contains the following formula: `=TR("7203.T;005930.KS","TR.TotalRevenue(Scale=6)", "SDate=0 EDate=-4 Period=FY0 Frq=FY CH=Fd;IN RH=rfperiod",B2)`. At the bottom, there are checkboxes for "Consolidate Formulas" (checked) and "Add data fields as cell references" (unchecked), along with "Update Frequency" and "Insert" buttons.

Updated at 10:07:23

		Total Revenue	Total Revenue
		7203.T	005930.KS
	FY0	28403118	200653482
	FY-1	27234521	206205987
	FY-2	25691911	228692667
	FY-3	22064192	201103613
	FY-4	18583653	165001771

## 10. Specific data retrieval



Example formula: =TR(\$A2,"TR.TotalRevenue(Period=#1,Scale=6)",,"B\$1)

Press "Refresh Worksheet"

	FY0	FY-1	FY-2	FY-3	FY-4
7203.T	28403118	27234521	25691911	22064192	18583653
005930.KS	200653.5	206206	228692.7	201103.6	165001.8

## 11. Data Audit Function

To enable: Eikon Excel> Options> Settings> Data Retrieval> Enable Click-through auditing  
 Right Click on the Value --> Thomson Reuters Eikon --> Data Audit  
 Can view the formula available for the calculation of the value

**Data Audit**

**Singapore Telecommunications Ltd - ROE Common Equity %, TTM**

RETURN ON COMMON EQUITY (INC. AVAIL. TO COMMON EXCL. XO ITEMS), TTM (MAR-16) 15.6%

Return on Common Equity (Inc. Avail. to Common Excl. XO Items), TTM =  $\frac{\text{Inc. Avail. to Common Excl. XO Items, TTM}}{\text{Avg. Common Eq., TTM}} \times 100$  15.6% =  $\frac{\text{SGD 3,871MM}}{\text{SGD 24,850MM}} \times 100$

BLUE TEXT = CLICK TO AUDIT

In order to identify which data items have Data audit: Use Autocolor "On Thomson Reuters Content with Click through"

**AutoColor**

Auto font color rules:

- On Pure Text
- On Pure Numbers
- On Text and Numbers
- On Formula with no Reference to Another Cell
- On Formula with Reference to Another Cell
- On Mixture of Text, Formula and Numbers
- On Thomson Reuters legacy formulas
- On Thomson Reuters Datastream formulas
- On Source for Linked Text
- On Thomson Reuters Content
- On Thomson Reuters Content with Click through
- On Thomson Reuters Delayed Real Time Content
- On Content imported from a PDF file

On/Off All

Enable AutoColor

Data Audit Function	
STEL.SI	15.57663
DBSM.SI	1.72953
OCBC.SI	0.36006
UOBH.SI	2.98E+10
SPRM.SI	0.725295

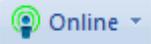
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## Part 9: Introduction to DataStream on Excel

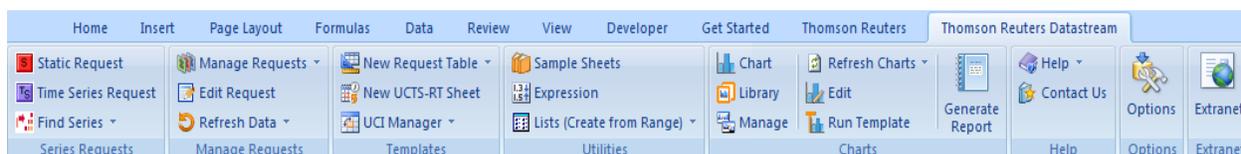
## 1. Overview

This short introduction will only serve as a simple guide to the DataStream feature available on Eikon Excel. For a more in depth understanding, please refer to the full **Thomson Reuters DataStream User Manual** instead.

To use DataStream for Microsoft Office Excel, use the **Thomson Reuters DataStream** menu in your Excel application.

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

At the **Thomson Reuters DataStream** tab within Eikon Excel, the following options can be found.



We will only be looking at 4 of these options in detail.

### 1. Static Request



The static request function allows you to request data for a specific date. For example, the price, PE or dividend yield for Apple on 14/01/1994.

Static Requests are also mostly utilised to pull up information about an instrument, such as sector information, and other identifiers such as ISIN and Sedol Codes.

### 2. Time Series Request



The time series request function allows you to request data over a specific data, defined by a start date, end date and frequency of data. For example, you can check the daily price of Apple from 14/01/1994 to 12/04/1994.

### 3. New Request Table



Users can consolidate their list of requests and organize them from here.

### 4. Chart



A visual representation of the time series data can be obtained. Economic indicators and their respective charts can also be generated.

## 2. Static Request

**Static Request**

**Request Details**

Series/List    
 RIC

Datatypes/Expressions

Date

**Options**

Display Custom Header    
 Display Row Titles  
 Display Column Titles  
 Display Headings  
 Transpose Data  
 Display Code  
 Display Currency  
 Display Latest Value First  
 Hyperlink to Series Metadata  
 Hyperlink to Datatype Definition

Display Expression  
 Description  
 Number

Display Datatype  
 Description  
 Mnemonic  
 Embed Formula

There are 5 main pieces of data that you would require to key in when using the **Static Request Function**.

1. Series/List
2. Datatypes/Expressions
3. Currency
4. Date
5. Options

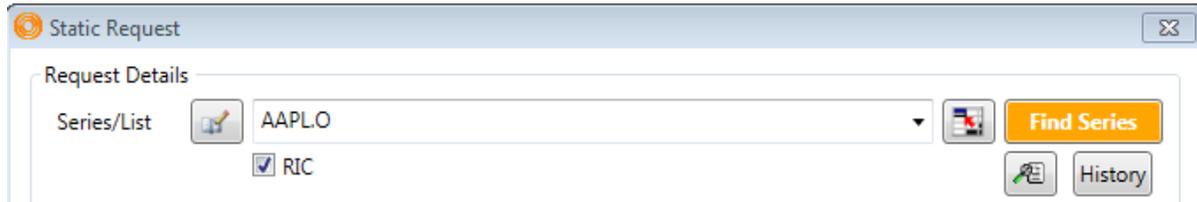
### Series/List

Here, you would need to specify the instrument that you wish to enquire about.

Other than typing in the name of the issuer, there are 3 ways for you to search for the instrument.

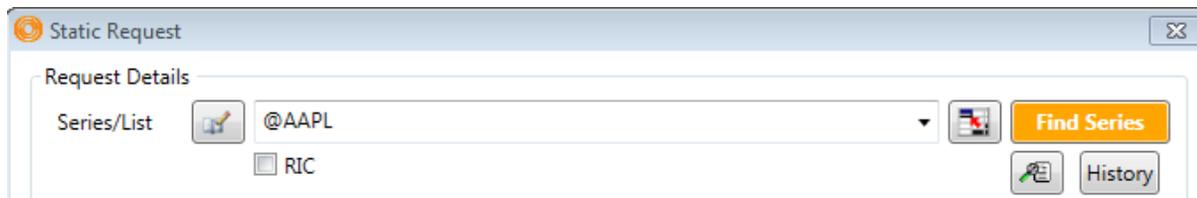
Firstly, you could key in the **RIC (Reuters Instrument Code)** if you are familiar with the shorthand.

E.g. If you know the RIC code for Apple (**AAPL.O**), you do the following.

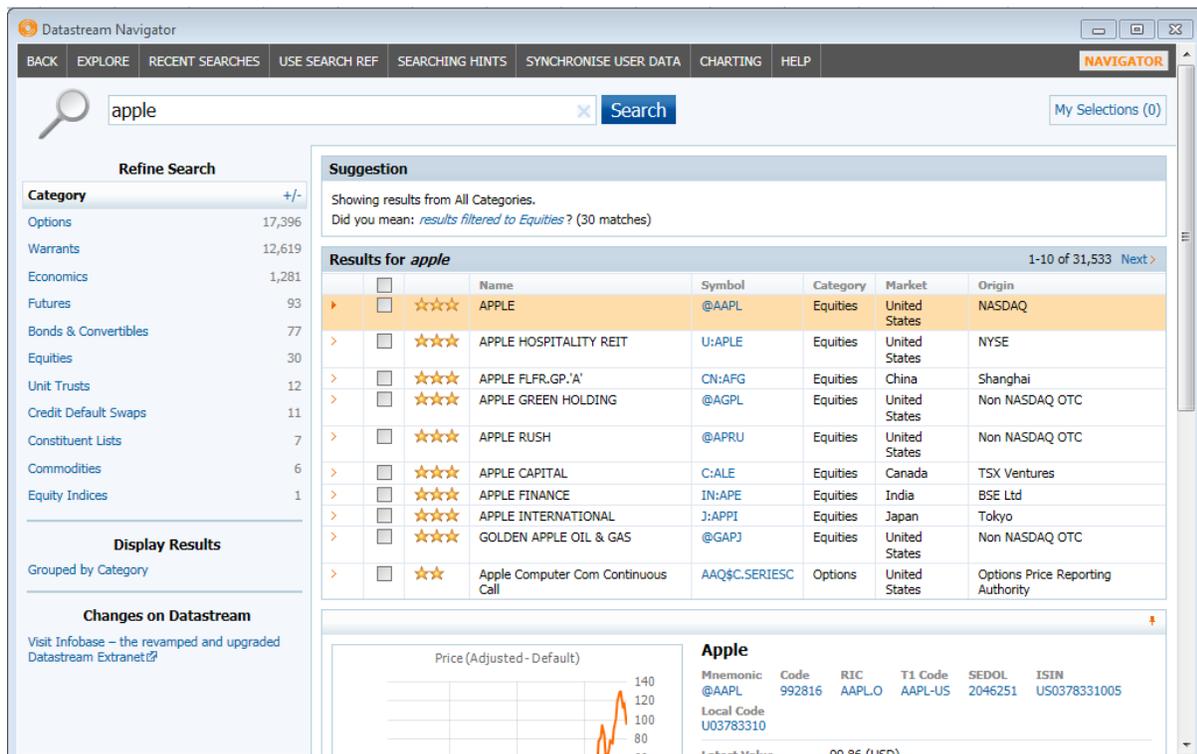


Tick the RIC box and type in the RIC of the instrument you require. Lists could be entered by separating RICs or DataStream codes with a comma. “ , ”

Secondly, you could key in the **DataStream Instrument Code** as follows, (E.g. @AAPL)



Thirdly, if you do not know either, you could search for it by pressing on the **Find Series** button.



Double click the symbol of the instrument or click on the box and press **Use**.

## Datatypes/Expression

In this box, the specific type of data necessary could be selected.

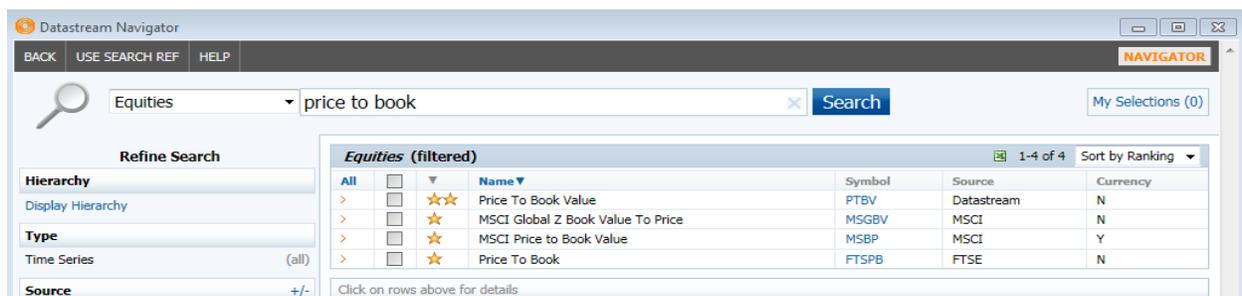


By default, if the box is left blank, the default data (e.g. price) of the instrument would be provided.

However, you could instead enter the different datatypes if you know the code. Lists could also be entered by separating each datatype with a comma.

For example, commonly used datatypes include **PE** (Price-to-earnings ratio) and **EPS** (Earnings per Share).

Alternatively, you could similarly use the **DFO Navigator** by selecting the **Datatypes** button.

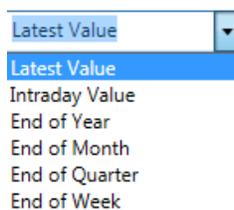


Type in the datatype that you wish to search for and double click on the symbol or click the box next to the name and press use.

## Currency

Press on the  button in order to adjust the currency. By default, the currency would be set to the local currency.

## Date



Choose the Date that you wish to obtain data for. For example, the latest available value is most commonly used.

## Options

Here, you could choose what titles you would want to be generated. Typically, the row and column titles are used.

### 3. Time Series Request

**Time Series Request**

**Request Details**

Series/List: 1  RIC  TS for each item in list **Find Series** **History**

Datatypes/Expressions: 2 **Datatypes**

3

Start Date: -2Y Frequency: Daily

End Date: 4

**Options**

Display Custom Header **Edit** 5

Display Row Titles

Display Column Titles

Display Headings

Transpose Data

Display Code

Display Currency

Display Latest Value First

Hyperlink to Series Metadata

Hyperlink to Datatype Definition

Display Expression:  1st Series  1st Series & Description

Display Datatype:  Description  Mnemonic

Embed Formula

TS Format:  Yearly-Date  Quarterly-Date

**Help** **Default Option** **Submit** **Cancel**

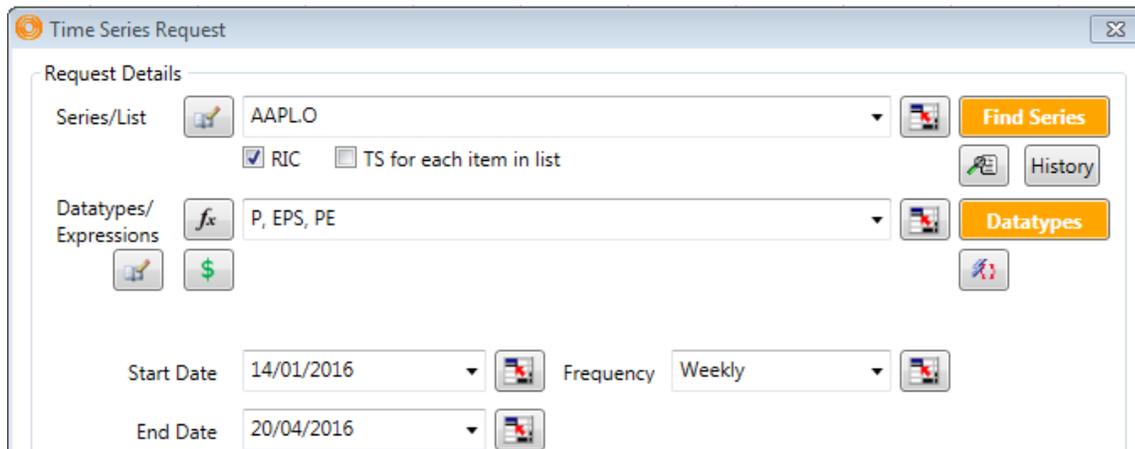
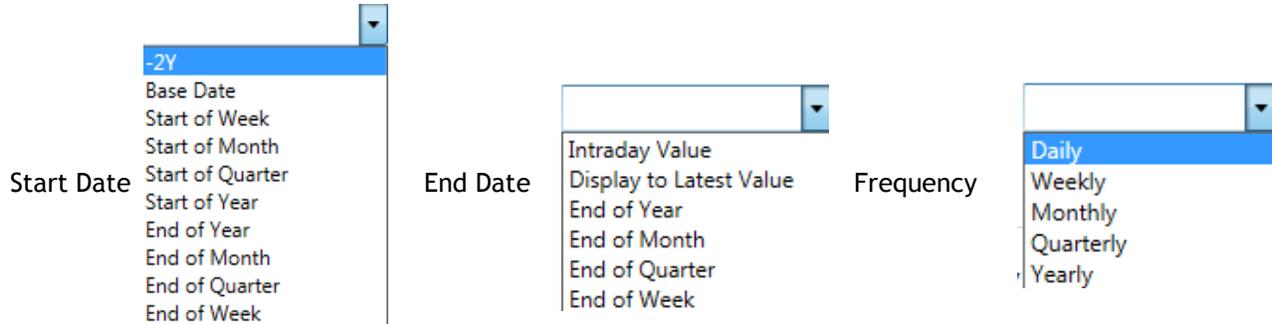
In order to conduct a time series request, the steps 1-3 and 5 are the same as that of a static request, with the difference being in the 4<sup>th</sup> step (Start, End Date and Frequency)

1. Series/List
2. Datatypes/Expression
3. Currency
4. Start Date, End Date and Frequency
5. Options

### Start Date, End Date and Frequency

When conducting a time series request, you would need to key in the start and end date as well as the frequency required.

The drop down tables are as follows,



Alternatively, you could key in the actual dates in the DD/MM/YY format as shown above. This would generate the table of figures as follows.

Name	APPLE	APPLE - EARNINGS PER SHR	APPLE - PER
14/1/2016	99.52	9.22	10.8
21/1/2016	96.3	9.22	10.4
28/1/2016	94.09	9.22	10.2
4/2/2016	96.6	9.42	10.3
11/2/2016	93.7	9.42	9.9
18/2/2016	96.26	9.42	10.2
25/2/2016	96.76	9.42	10.3
3/3/2016	101.5	9.42	10.8
10/3/2016	101.17	9.42	10.7
17/3/2016	105.8	9.42	11.2
24/3/2016	105.67	9.42	11.2
31/3/2016	108.99	9.42	11.6
7/4/2016	108.54	9.42	11.5
14/4/2016	112.1	9.42	11.9

## 4. Request List

### Constituent List of Equity Indices

Before discussing how to use the request list function on DataStream, let's explore how to view data for constituents of an index.

For example, the Hang Seng Index in Hong Kong trades with the DataStream code <HNGKNGI>. In order to generate the data for the list of constituents that make up the index, one can add an "L" in front of the DataStream code. Hence, the data for the constituents has the code <LHNGKNGI>

However, it would be good to note that DataStream cannot generate data for a time series constituent list (TS). Instead, utilise the TSL to create a list for constituent list.

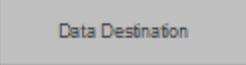
### Static Request (Constituent List)

The screenshot shows the Thomson Reuters DataStream interface. The 'Request List' dialog box is open, displaying various options for generating data. Below the dialog box, a table shows the generated requests:

Update	Request Type	Format	Series Lookup	Datatype/Expressions	Start Date	End Date	Freq	Data Destination					
Y	N	S	TS	L	CH	Select Format	Find Series	Datatypes	fx			Daily	
YES		S		RC	HNGKNGI		NAME.PB			-1D			Sheet1!\$A\$1
YES		S		RC	LHNGKNGI		NAME.PB			14/01/2016	12/04/2016	WEEKLY	Sheet1!\$K\$1

Here are the steps in order to generate a request list as shown above.

- In the first column, press **Y** for **Yes** to automatically update the table with the live values. Alternatively, press **N** for **No**.
- In the second column, indicate the type of request necessary, by pressing the buttons in grey
  - S - Static request
  - TS - Time series request
  - TSL - Time series for lists
  - L - List request
  - C - Chart request
- In the third column, indicate the format required. (i.e. Row, Column = RC)
  - F - Custom Header
  - R - Row Titles
  - C - Column Titles
  - H - Request Headings
  - T - Transpose returned Data
  - \$ - Include currency
  - X - Data only
  - E - Display expression 1st series as title
  - N - Display expression title as title
  - K - Hyperlink to Series metadata
  - B - Hyperlink to Datatype definition
  - M - Display Code
  - L - Latest Value First
  - Y - Display dates in Yearly Format
  - Q - Display dates in Quarterly Format

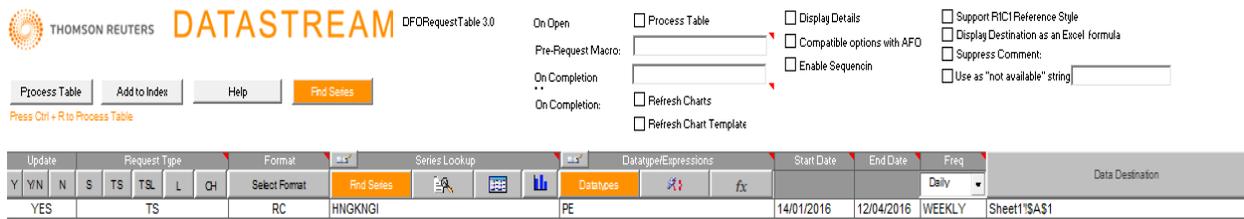
- In the fourth column, indicate the datatype required. Use the Datatypes search if you are not sure what the shorthand is.
- For a static request, the start date could be -1M or -1D or the specific date and no end date or frequency is required.
- In order to generate the data in a separate sheet, create a new sheet, and highlight the data from the “Update” column to the “Data Destination Column”. Next, press the  button.
- Lastly, press the  button for the table to be generated.

Type	NAME	PE		Type	NAME	PB
HNGKNGI	HANG SENG	10.28		70899K	AIA GROUP	42.7
				26030V	BOC HONG KONG (HDG.)	22.2
				35968W	BANK OF CHINA 'H'	3.11
				951410	BANK OF EAST ASIA	24.25
				31203N	BANK OF COMMS.'H'	4.87
				50520M	BELLE INTERNATIONAL HDG.	5.41
				31988F	CHINA CON.BANK 'H'	4.82
				998511	CITIC	11.84
				9507U2	CHEUNG KONG PR.HDG.	46.15
				930492	CK HUTCHISON HOLDINGS	97.85
				887014	CHEUNG KONG INFR.HDG.	71
				929593	CLP HOLDINGS	63
				256842	CNOOC	7.29
				729076	CATHAY PACIFIC AIRWAYS	12.98
				28201C	CHINA LIFE INSURANCE 'H'	20.95
				315805	CHINA MRCH.HDG.INTL.	21.65
				867874	CHINA MOBILE	81.25
				316071	CHINA OS.LD.& INV.	22.4
				887449	CHINA RESOURCES LAND	18.1
				27962U	CHINA RES.POWER HDG.	13.96
				31162D	CHINA SHENHUA EN.CO.'H'	11.36
				280949	CHINA UNICOM (HONG KONG)	8.64
				314060	GALAXY ENTERTAINMENT GP.	21.55
				929610	HONG KONG AND CHINA GAS	14.56
				280037	HONG KONG EXS.& CLEAR.	179.7
				923812	HSBC HOLDINGS	56.2
				951407	HANG LUNG PROPERTIES	15.68
				929594	HANG SENG BANK	133.7
				997697	HENDERSON LD.DEV.	42.9
				675810	HENGAN INTL.GP.	66.2
				41271W	INDL.& COML.BK.OF CHINA 'H'	4.15
				755101	KUNLUN ENERGY	5.74
				362033	LENOVO GROUP	6.72
				315769	LI & FUNG	4.55
				298493	LINK RLEST.INV.TST.	44.85
				264718	MTR	36.4
				29042F	CHINA MENGNIU DAIRY	11.28
				930223	NEW WORLD DEV.	6.81
				280366	PETROCHINA 'H'	4.48
				29091W	PING AN INSURANCE 'H'	36.3
				929595	POWER ASSETS HOLDINGS	70.35
				929146	SUN HUNG KAI PROPERTIES	89.35
				68341V	SANDS CHINA	22.25
				997310	SINO LAND	10.2
				266578	CHINA PTL.& CHM. 'H'	4.22
				916546	SWIRE PACIFIC 'A'	76.75
				29061M	TENCENT HOLDINGS	137
				865347	TINGYI CYMN.ISLE.HLDG.	9.23
				51780L	WANT WANT CHINA HOLDINGS	4.91
				929597	WHARF HOLDINGS	38.75

A table as follows would then be generated, with the P/E ratio in one column and the list of constituents and the price in another.

### Time Request (Request Table)

To perform a time request, similar steps could be taken. However, constituent lists cannot be generated for time request lists.



Take note that for a time request, the start date, end date and frequency must be entered.

As a result, a table as follows can be generated.

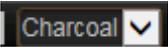
Name	HANG SENG - PER
14/1/2016	8.01
21/1/2016	7.51
28/1/2016	7.78
4/2/2016	7.81
11/2/2016	7.55
18/2/2016	7.89
25/2/2016	7.77
3/3/2016	8.17
10/3/2016	8.27
17/3/2016	8.84
24/3/2016	9.31
31/3/2016	10.15
7/4/2016	9.9

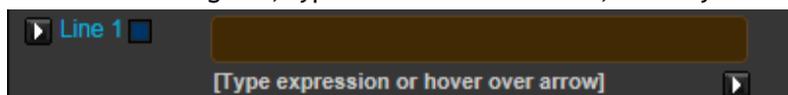
A request list is useful for consolidating all the inputs of every request created on the file and can allow users to quickly locate the data that they are looking for.

Even though there are additional functions for the different request types, we will not cover it in the course of this short introduction.

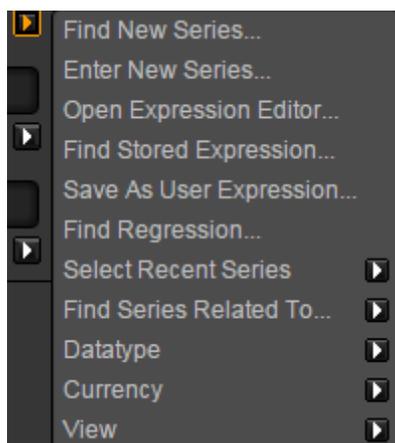
## 5. Charting

On DataStream, you would be able to plot charts of economic indicators and different datatypes of different instruments.

1. Press the  button in the Thomson Reuters DataStream tab. Alternatively, in the Eikon Toolbar, search <CBOOK.
2. Press the  to open a new chart
3. Change the colour scheme  if necessary (Charcoal or Pearl)
4. In the following box, type the DataStream code, or a keyword to search for the instrument required.

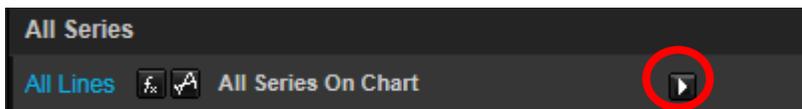


5. If the DataStream code is not known, press the small arrow at the bottom right of the screenshot, and press on **Find New Series**. Search for the necessary series as you have done for “Series/Lists” in the Static and Time Series Request.
6. To change the datatype for individual instruments, click on the arrow located next to the line in the formula



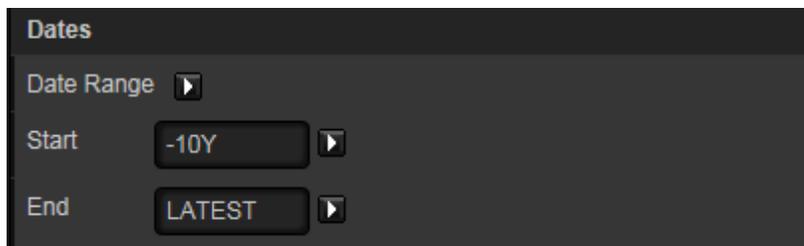
7. Select “Datatype” to change the specific instrument’s datatype.

If you wish to change the datatype(s) for multiple instruments, you could do the following.



1. Firstly, press on the arrow and select **Datatypes**. After which, you could either manually enter the Datatype or use the **find new datatype** function.

2. Next, if you want to change the data of the charts, do it in the boxes as follows. You can either insert the period of time or type in the date in the DD/MM/YY format.



3. If you wish to view the data for the chart plotted, select the  button at the top right hand corner of the page.

4. Sometimes, the data follow different axis (i.e. different currency or one being in absolute price and the other being in percentage). Hence, double click on the line in order to change the details of the line. Here, you can change the colour and weight of the line as well as the name in the legend.

5. If you wish to plot different information, such as the percentage year-on-year change, or the moving average, you could do so by pressing the  button below each line.

6. After plotting the line, save the chart by pressing the  button. (Note that unless you save the chart, you would be unable to export the chart)

7. After which, you are now free to export the chart to different Microsoft Office Applications (Word, Excel, and PowerPoint)

8. If you wish to update the charts in your report or presentations, you could go to the  button in the Thomson Reuters tab to update all the charts or individual charts every time you open the file.

## Chapter 2: Economic Indicators

For example,

Plot the Year on Year change of the Price-to-Book Value of Apple and Samsung for the last 10 years.

Hence, you would key in the following and the chart will be produced.

Series

Line 1  PCH#(@AAPL(PTBV),1Y)  
% APPLE - PTBV

Line 2  PCH#(KO:SGL(PTBV),1Y)  
% SAMSUNG ELECTRONICS - PTBV

Line 3  [Type expression or hover over arrow]

All Series

All Lines  All Series On Chart

Dates

Date Range

Start -10Y

End LATEST

