



Refinitiv Eikon training

Hanken School of Economics

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An LSEG Business

REFINITIV[®]



Agenda

Please use the chat to post your questions

Eikon

- Equities: Estimates, Financials & Peer Analysis
- Screening public & private companies, government & corporate bonds

Excel add-in

- Time series & fundamentals data
- Data retrieval using template

Datastream

- Time series request
- User Created Indices (UCI)

Codebook

Introducing Codebook: Refinitiv's cloud-hosted development environment for Python scripting

Resources & Certification

Refinitiv Academy: Live Instructor-Led Learning

Eikon data retrieval

Statement View: Actual vs. Forecast

1

2

3

Key Measures

Key Measures

Mean

Periodicity

Annual

Actual/Predicted Surprise %

Guidance

Update

Next Earning Report: 27-Apr-2021

	HISTORICAL (ACTUALS)					FORECAST (MEAN)				
	FY Dec-16	FY Dec-17	FY Dec-18	FY Dec-19	FY Dec-20	FY Dec-21	FY Dec-22	FY Dec-23	FY Dec-24	FY Dec-25
EARNINGS PER SHARE	-0,57	-1,73	-0,27	0,04	2,24	4,20	5,59	6,72	9,15	12,03
YoY Growth %	-24,78%	<100,00%	84,64%	>100,00%	>100,00%	87,29%	33,15%	20,26%	36,14%	31,56%
EARNINGS PER SHARE	-0,94	-2,37	-1,14	-0,98	0,64	6,38	6,58	5,97	7,44	8,45
YoY Growth %	32,47%	<100,00%	51,65%	13,99%	>100,00%	>100,00%	3,22%	-9,29%	24,69%	13,47%
REVENUE	7 000	11 759	21 461	24 578	31 536	48 685	62 569	75 664	90 659	99 378
YoY Growth %	32,29%	67,98%	82,51%	14,52%	28,31%	54,38%	28,52%	20,93%	19,82%	9,62%
GROSS PROFIT MARGIN	25,49%	21,10%	-	16,56%	-	22,22%	22,81%	23,50%	24,06%	25,13%
YoY Growth %	-	-	-	-	-	0,24%	0,59%	0,68%	0,56%	1,07%
EBITDA	629,79	528,42	2 262	2 983	5 817	8 727	11 565	15 062	17 636	20 506
YoY Growth %	>100,00%	-16,10%	>100,00%	31,87%	95,01%	50,03%	32,51%	30,24%	17,09%	16,27%
DEPRECIATION & AMORTIZATION	947,10	1 636	1 901	2 154	2 322	2 834	3 072	3 413	4 079	4 820
YoY Growth %	>100,00%	72,74%	16,20%	13,31%	7,80%	22,03%	8,41%	11,11%	19,50%	18,16%
EBIT	-317,31	-1 108	360,95	829,00	3 728	6 374	9 154	11 268	15 184	18 285
YoY Growth %	-51,74%	<100,00%	>100,00%	>100,00%	>100,00%	70,96%	43,62%	23,09%	34,75%	20,42%
INTEREST EXPENSE	198,81	471,26	663,07	685,00	748,00	726,00	716,04	678,85	653,68	617,83
YoY Growth %	67,28%	>100,00%	40,70%	3,31%	9,20%	-2,94%	-1,37%	-5,19%	-3,71%	-5,48%
PRE-TAX PROFIT	-485,04	-1 685	-255,72	233,00	2 751	4 993	7 309	10 489	14 008	18 758
YoY Growth %	<100,00%	<100,00%	84,82%	>100,00%	>100,00%	81,51%	46,37%	43,51%	33,55%	33,91%
TAX RATE	-	-	-	47,21%	11,89%	18,44%	18,86%	19,57%	20,17%	20,40%
YoY Growth %	-	-	-	-	-35,32%	6,55%	0,42%	0,71%	0,60%	0,23%
TAX PROVISION	26,70	31,55	57,84	110,00	327,00	735,45	1 173	1 576	2 162	3 174
YoY Growth %	>100,00%	18,16%	83,34%	90,19%	>100,00%	>100,00%	59,43%	34,45%	37,15%	46,79%
NET INCOME	-413,61	-1 437	-227,07	35,77	2 424	4 471	6 237	7 913	11 368	14 913
YoY Growth %	-40,25%	<100,00%	84,20%	>100,00%	>100,00%	84,45%	39,49%	26,88%	43,66%	31,19%
PRE-TAX PROFIT REPORTED	-746,35	-2 209	-1 005	-665,00	1 154	4 107	6 627	8 121	10 121	12 476
YoY Growth %	<100,00%	<100,00%	54,52%	33,81%	>100,00%	>100,00%	61,35%	22,55%	24,62%	23,27%
NET INCOME REPORTED	-674,91	-1 961	-976,09	-862,00	721,00	3 345	5 819	6 532	7 914	8 400
YoY Growth %	24,05%	<100,00%	50,23%	11,69%	>100,00%	>100,00%	73,95%	12,27%	21,14%	6,15%

SETTINGS

Confirm

Cancel

CONSOLIDATED / PARENT BASIS

Primary Basis

NUMBER OF FISCAL YEARS

5

Number of Historical Fiscal Years

5

Number of Forward Fiscal Years

CALENDAR YEAR CALCULATION METHODOLOGY

Weighted Annual Blend

DECIMAL PLACES

Default

Per Share Values

Default

Non Per Share Values

Default

Percentage Values

SEGMENTS

Include Segment Data when available

PRODUCTS

Include Products Data For Key Measures

Include Products Data For All Measures

FONT SIZE AND ROW HEIGHT

Small

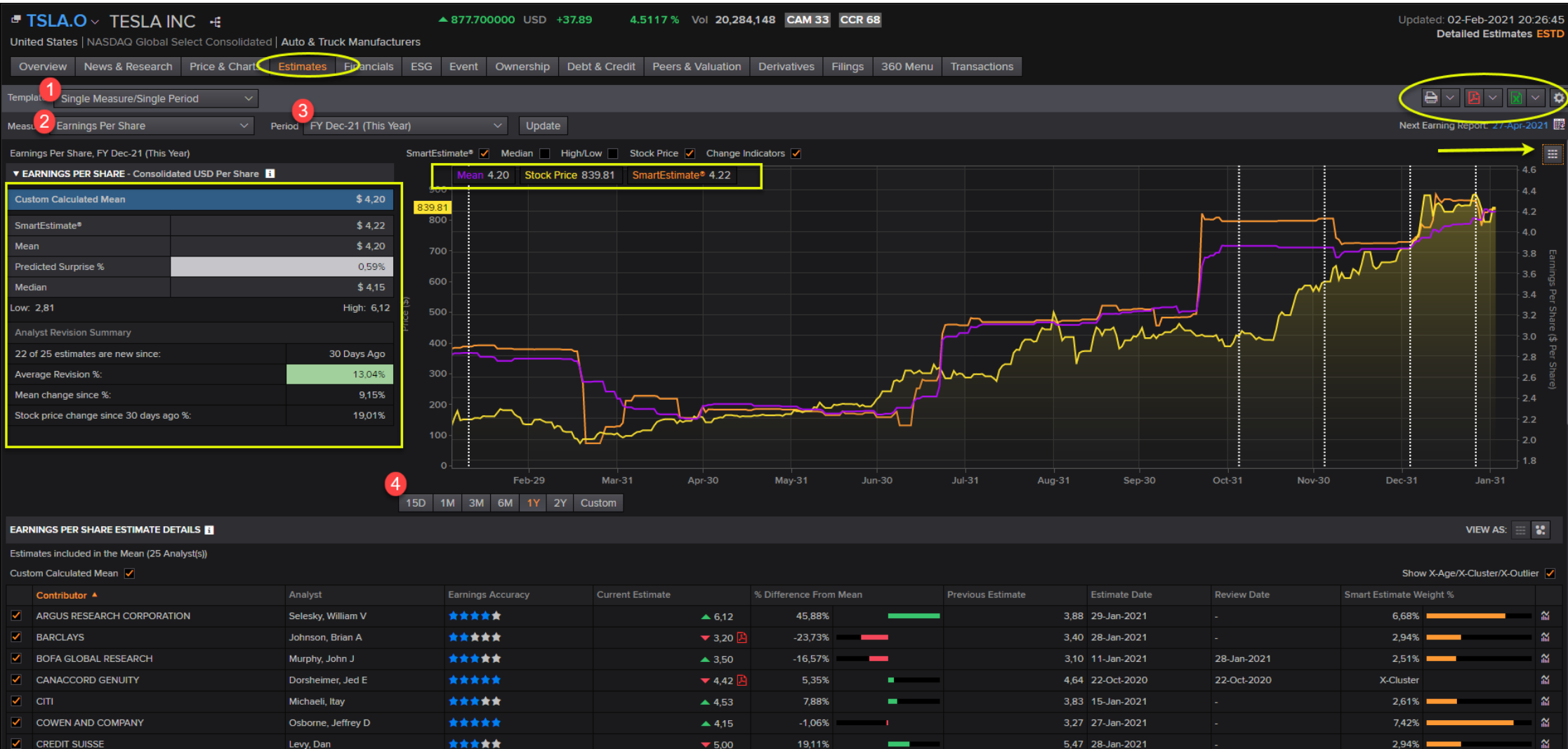
Medium

Large

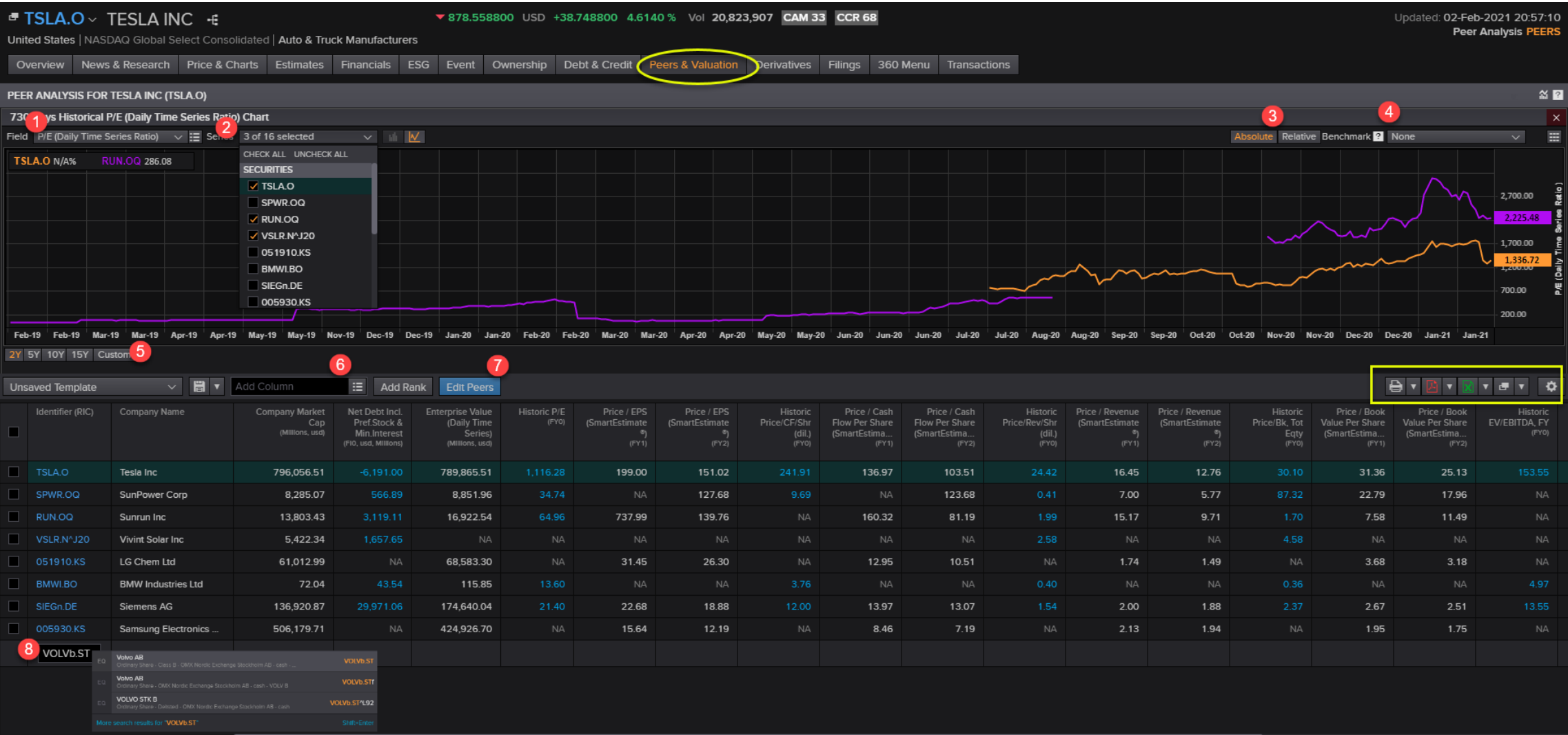
UPDATE SETTINGS

Update Via Button

Detailed Estimates by Measure



Peer Analysis



Screening Public and Private Equities (SCREENER)

Nordic Banks_1B

Currency: EUR

UNIVERSE Public Companies 65.2K

Include: Active, Public, Primary

Include: Indices, Lists, Portfolios, Screens, Stocks

Exclude: None

QUICK FILTERS

Country of Exchange

Country of Incorporation

Average Daily Value Traded - 52 Weeks

TRBC Economic Sector Name

GICS Sector Name

Add Filter

Country of Headquarters

Include Denmark and 4 more...

AND

Company Market Cap

Greater Than or Equal (>=) 1,000,000,000.00 EUR

AND

TRBC Industry Name

Include Financial & Commodity Market Operators & and 6 more...

Counts 20

Forward Valuation

PERSONAL TEMPLATES

Valuation (copy)

Credit Rating

Nordic companies_Finance

06-Aug

SAMPLE TEMPLATES

Forward Valuation

Valuation

Peer Comparison

Fundamental Ratios

Import Template

View and Manage all Templates

REPORT

Forward Valuation

Add Column

Group

Add Rank

Settings

Export

Print

	EV / Revenue (SmartEstimate %) (NTM)	EV / EBITDA (SmartEstimate %) (NTM)	Price / EPS (SmartEstimate %) (NTM)	Price / Cash Flow Per Share (SmartEstimate %) (NTM)	Price / Book Value Per Share (SmartEstimate %) (NTM)	Price / Revenue (SmartEstimate %) (NTM)	Divid
Enskilda Banken AB	11.24	NA	10.06	10.10	1.11	3.93	
06-Aug	0.80	7.54	15.96	6.36	1.04	0.50	
ndelsbanken AB	21.40	NA	10.01	8.44	0.94	3.69	
k A/S	22.30	NA	10.80	6.64	0.56	2.13	
A/S	55.03	NA	9.55	NA	0.47	2.26	
g Landbobank A/S	7.56	NA	14.98	NA	1.81	7.26	
ASA	1.58	NA	11.24	NA	0.87	0.80	
STDB.CO	13.27	NA	12.90	8.99	1.14	4.86	
Sydbank A/S	2.01	NA	9.46	NA	0.63	1.71	
SWEDa.ST	12.79	NA	9.39	8.65	1.01	3.61	
AVANZ.ST	33.33	NA	30.70	NA	9.43	15.76	
MING.OL	9.48	NA	9.88	NA	0.98	2.20	
SRBANK.OL	23.29	NA	9.71	NA	0.92	3.85	
NDASE.ST	17.05	NA	9.53	6.26	0.81	3.06	
INTRUM.ST	4.49	8.67	9.16	3.19	1.19	1.62	
NOFI.OL	3.66	NA	7.37	NA	1.19	2.37	
SPA1.OL	11.32	NA	10.07	NA	0.99	2.88	
ARION.IC	8.18	NA	13.52	NA	0.99	3.57	
EQTAB.ST	21.64	35.89	43.76	41.94	14.88	22.32	
SAVE.ST	72.70	119.65	34.15	NA	9.05	14.58	

Screening Government & Corporate Bonds (GOVSRCH)

ADVANCED SEARCH

UNIVERSEGovernment and Corporate Bon...
SEARCHEU Bonds_Pharma BB

Include
Issuer Type - Corporate
Bond Type - Bonds
Status - Active
Sukuku - Include

QUICK FILTERS
▶ Issuer
▶ Market Code
CouponAdd
MaturityAdd
RatingsAdd
Add filter
Advanced SyntaxCounts

✓ Ratings

Issuer Moody's Long-term Issuer Rating
Scope Both
Greater Than B3
Solicited and Unsolicited

Or

Issuer Fitch Long-term Issuer Default Rating
Scope Both
Greater Than B-
Solicited and Unsolicited

AND

✓ Sector

Include
Pharmaceuticals

AND

✓ Country of Issue

Include
Sweden
France
Russia
And 20 more

AND

✓ Maturity

After
27/04/2020

RESULTS (22)

Add / Remove Columns16Group

Settings

Columns

Refresh

Filter

Print

Download

Issuer	Preferred RIC	Ticker	ISIN	Coupon	Maturity	Yield to Matur...	Issue Date	Principal Currency
Sanofi SA	FR0012969020=	SASY	FR0012969020	0,8750	22/09/2021	0,1454490	22/09/2015	Euro
Sanofi SA	FR0013409836=	SASY	FR0013409836	0,0000	21/03/2022	(0,3070200)	21/03/2019	Euro
Vifor Pharma AG	CH42819427=	VIFN	CH0428194275	0,7500	13/09/2022	0,2056320	13/09/2018	Swiss Franc
Sanofi SA	FR0013201621=	SASY	FR0013201621	0,0000	13/09/2022	(0,2625720)	13/09/2016	Euro
Amgen Inc	CH31420936=	AMGN	CH0314209369	0,4100	08/03/2023	(0,2317570)	08/03/2016	Swiss Franc
Sanofi SA	FR0013324332=	SASY	FR0013324332	0,5000	21/03/2023	(0,2292360)	21/03/2018	Euro
Sanofi SA	FR0013143997=	SASY	FR0013143997	0,6250	05/04/2024	(0,2140360)	05/04/2016	Euro
Eli Lilly and Co	CH32373559=	LLY	CH0323735594	0,1500	24/05/2024	(0,3448420)	24/05/2016	Swiss Franc
Sanofi SA	FR0013505104=	SASY	FR0013505104	1,0000	01/04/2025	(0,1369730)	30/03/2020	Euro
Novartis AG	CH27019098=	NOVN	CH0270190983	0,2500	13/05/2025	(0,4010440)	13/02/2015	Swiss Franc
Sanofi SA	FR0012969038=	SASY	FR0012969038	1,5000	22/09/2025	(0,1213500)	22/09/2015	Euro
Sanofi SA	FR0013324340=	SASY	FR0013324340	1,0000	21/03/2026	(0,1454930)	21/03/2018	Euro
Sanofi SA	FR0013201639=	SASY	FR0013201639	0,5000	13/01/2027	(0,1175330)	13/09/2016	Euro
Sanofi SA	FR0013144003=	SASY	FR0013144003	1,1250	05/04/2028	(0,0841880)	05/04/2016	Euro
Eli Lilly and Co	CH32373560=	LLY	CH0323735602	0,4500	24/05/2028	0,0152600	24/05/2016	Swiss Franc
Sanofi SA	FR0013409844=	SASY	FR0013409844	0,8750	21/03/2029	0,0035370	21/03/2019	Euro
Novartis AG	CH27019099=	NOVN	CH0270190991	0,6250	13/11/2029	(0,0871650)	13/02/2015	Swiss Franc
Sanofi SA	FR0013324357=	SASY	FR0013324357	1,3750	21/03/2030	0,0383480	21/03/2018	Euro
Sanofi SA	FR0013505112=	SASY	FR0013505112	1,5000	01/04/2030	0,0700950	30/03/2020	Euro
Sanofi SA	FR0013409851=	SASY	FR0013409851	1,2500	21/03/2034	0,1429830	21/03/2019	Euro
Novartis AG	CH27019100=	NOVN	CH0270191007	1,0500	11/05/2035	0,1716940	13/02/2015	Swiss Franc
Sanofi SA	FR0013324373=	SASY	FR0013324373	1,8750	21/03/2038	0,2976100	21/03/2018	Euro

Excel Add-in

How to retrieve time series (fundamentals) using the Formula Builder

The screenshot shows the Refinitiv Eikon Formula Builder interface. The background is an Excel spreadsheet with a table of financial data. The Formula Builder window is overlaid on the spreadsheet.

Excel Spreadsheet Table:

RIC	Data Items	Data Item Code
.SPX	Company Name	TR.CommonName
AAPL.O	ISIN	TR.ISIN
MSFT.O	Revenue	TR.Revenue
AMZN.O	Forward P/E (Daily TS ratio)	TR.FwdPE
GOOGL.O	EBITDA	TR.EBITDA
GOOG.O	Company Market Cap	TR.Company Market
TSLA.O	Net Income After Taxes	TR.NetIncomeAfter
FB.O		
BRKb		
JNJ		
V		
JPM		
WMT		
NVDA.O		
MA		
PG		
UNH		
DIS		
HD		
PYPL.O		
BAC		
NFLX.O		
INTC.O		
CMCSA.O		
ADBE.O		
VZ		
ABT		

Formula Builder Annotations:

- 1**: Home tab in the Excel ribbon.
- 2**: Instruments input field with the example text: "2. start typing your instruments here or use cell reference if you have the RIC codes (like int he example)".
- 3**: Search Data Items field.
- 4**: Fields list on the left.
- 5**: Parameters & Quick Functions panel on the right.
- 6**: Layout button at the bottom left of the Formula Builder.
- 7**: Insert button at the bottom right of the Formula Builder.

Formula Builder Content:

- Instruments:** AAPL.O MSFT.O AMZN.O GOOGL.O TSLA.O
- Category:** Price & Volume (345), Refinitiv Financials (1582), General Information (42), Standardized Income Statement (313), Standardized Balance Sheet (365), Standardized Cash Flow (106), Income Statement KPIs (153), Balance Sheet KPIs (99), Business and Geographic Segments (106), Private Company Fundamentals (398), Period End Ratios (1386).
- Fields:** Revenue, Total Revenue, Bank Total Revenue, Net Revenues (Investment Banks Only), Normalized EBITDA, Normalized EBIT, Normalized Income Avail to Cm Shareholders, Normalized Income After Taxes, Normalized Income Before Taxes, Income Avail to Cm Shareholders Incl Extra.
- Parameters:** Last, 5, FY, Last, Start-End, Period 2, FY0, Scale 0, Roll Periods True, Align Type PrelimDate, Reporting State Rsdtd, Consolidation Basis Primary, Interim Type Single, Include Partial Yes.
- Selected Items:** TR.Revenue
- Formula:** =TR("AAPL.O;MSFT.O;AMZN.O;GOOGL.O;TSLA.O"; TR.Revenue; Period=FY0 Freq=FY SDate=0 EDate=4 CH=Fd RH=IN;14)

How to retrieve time series (FX) data using the Formula Builder

1. Click the 'Formula Builder' icon in the Refinitiv Eikon ribbon.

2. Start typing your instruments here or use cell reference if you have the RIC codes (like in the example).

3. Click the 'Time series' tab for historical data.

4. Choose the 'Interval'.

5. Search your data type or select from the Categories. Double-click to add.

6. Define your Parameters.

7. Customize your Layout.

8. Click the 'Insert' button.

The formula being built is: `=@RHistory(A3:A5,\"BID.Timestamp\";\"BID.Close\";\"START:03-Feb-2020 INTERVAL:1D\";\"TSREPEAT:NO CH:IN;Fd\";B2)`

Timestamp	KRW= Bid Close	CNY= Bid Close	CNH= Bid Close
01/02/2021	1117,66	6,4654	6,4707
29/01/2021	1117,64	6,425	6,4459
28/01/2021	1112,52	6,4491	6,4719
27/01/2021	1108,38	6,4822	6,4962
26/01/2021	1101,02	6,4635	6,4718
25/01/2021	1102,58	6,4784	6,4854
22/01/2021	1105,41	6,481	6,4945
21/01/2021	1099,88	6,4595	6,4633
20/01/2021	1096,35	6,465	6,4609
19/01/2021	1101,44	6,4777	6,4787
18/01/2021	1102,52	6,4902	6,4958
15/01/2021	1103,27	6,48	6,4841
14/01/2021	1095,88	6,4736	6,4633
13/01/2021	1097,12	6,4677	6,4645
12/01/2021	1094,48	6,461	6,4419
11/01/2021	1097,23	6,4795	6,4782
08/01/2021	1092,93	6,475	6,4632
07/01/2021	1094,28	6,476	6,4699
06/01/2021	1087,93	6,4617	6,4487
05/01/2021	1086,42	6,455	6,4357
04/01/2021	1086,48	6,4601	6,4541
01/01/2021	1084,73	6,525	6,5028
31/12/2020	1084,47	6,525	6,5017
30/12/2020	1087,62	6,5208	6,5049
29/12/2020	1090,97	6,53	6,517
28/12/2020	1095,6	6,5346	6,5321
25/12/2020	1099,07	6,5408	6,5163
24/12/2020	1101,59	6,53	6,5169
23/12/2020	1106,65	6,54	6,5318
22/12/2020	1109,72	6,5426	6,5392
21/12/2020	1102,55	6,5467	6,5332
18/12/2020	1099,39	6,5348	6,5182

How to retrieve static data using the Formula Builder

1

Home

Insert

Page Layout

Formulas

Data

Review

View

Help

Refinitiv Eikon

Refinitiv Eikon Datastream

Refinitiv 365

Templates

Build Formula

Get Data

Search

Lists

App Library

Screener

Charts

Home

Deal Screener

League Table

Volume Analysis

Refresh All Workbooks

Linking

PDF Link

AutoColor

Trace

Objects

Utilities

Formula Tools

Pause Updates

Contribute Now Live Mode

Contribute Data

Options

F4

Sensitivity: Confidential

	A	B	C	D
1				
2				
3		RIC	Data Items	Data Item Code
4		.SPX	Company Name	TR.CommonName
5		AAPL.O	ISIN	TR.ISIN
6		MSFT.O	Revenue	TR.Revenue
7		AMZN.O	Forward P/E (Daily TS ratio)	TR.FwdPE
8		GOOGL.O	EBITDA	TR.EBITDA
9		GOOG.O	Company Market Cap	TR.Company Market Cap
10		TSLA.O	Net Income After Taxes	TR.NetIncomeAfterTaxes
11		FB.O		
12		BRKb		
13		JNJ		
14		V		
15		JPM		
16		WMT		
17		NVDA.O		
18		MA		
19		PG		
20		UNH		
21		DIS		
22		HD		
23		PYPL.O		
24		BAC		
25		NFLX.O		
26		INTC.O		
27		CMCSA.O		
28		ADBE.O		
29		VZ		
30		ABT		

2

Refinitiv Eikon - Microsoft Office | Formula Builder

Instruments: AAPL.O MSFT.O AMZN.O GOOGL.O TSLA.O

2: start typing your instruments here or use cell reference if you have the RIC codes

3

DATA ITEMS

Interval: Daily

revenue

4

Category:

Fields:

Description

Parameters & Quick Functions

Top Matches (20)

Real Time (1)

Refinitiv Financials (72)

Period End Ratios (154)

Time Series Ratios (6)

Refinitiv I/B/E/S Estimates (1899)

StarMine Models & Analytics (29)

Ownership (12)

Japan Fundamentals (168)

Time Series Data (12)

Environmental, Social and Governance (61)

Revenue (LTM)

Revenue (LTM) Per Share

Revenue (NTM)

Turnover

Revenue

Turnover

Revenue - Mean

Price To Sales Per Share (Daily Time Series Ratio)

Enterprise Value To Sales (Daily Time Series Ratio)

Add All (20)

Parameters:

As of 2

Financial Period 2

Scale 0

Roll Periods True

Align Type PrelimDate

Reporting State Rsdtd

Consolidation Basis Primary

Interim Type Single

Include Partial Yes

5

Selected Items: TR.Revenue Drag to Reorder

3. Search your data type or select from the Categories. Double-click to add.

4. Define your parameters

5. Customise how your output will look like in Layout

6

=TR("AAPL.O;MSFT.O;AMZN.O;GOOGL.O;TSLA.O";TR.Revenue";CH=Fwd RH=IN";F4)

Layout

Update Frequency

Add data fields as cell references

Consolidate Formulas

Cancel

Insert

Datastream for Office

Creating a Time Series Request

The screenshot illustrates the process of creating a time series request in the Refinitiv Eikon Datastream. The interface is divided into several key areas:

- Top Menu Bar:** Includes 'File', 'Home', 'Insert', 'Page Layout', 'Formulas', 'Data', 'Review', 'View', 'Help', and 'Refinitiv Eikon'. The 'Refinitiv Eikon Datastream' tab is active.
- Left Panel (Time Series Request Dialog):**
 - Request Details:**
 - Series/List:** A text input field with a 'Find Series' button (labeled 1).
 - Datatypes/Expressions:** A dropdown menu with a 'Datatypes' button (labeled 2).
 - Start Date:** A dropdown menu set to '-2Y' (labeled 3).
 - Frequency:** A dropdown menu set to 'Daily' (labeled 4).
 - End Date:** A dropdown menu (labeled 5).
 - 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
 - ☐ 1st Series
 - ☐ 1st Series & Description
 - ☐ Display Datatype
 - ☒ Description
 - ☐ Mnemonic
 - ☒ Embed Formula
 - ☐ Yearly-Date
 - ☐ Quarterly-Date
 - ☒ Auto Refresh
 - Buttons:** 'Help', 'Default Option', 'Submit' (labeled 6), and 'Cancel'.

- Right Panel (DFO Navigator):**
- Search Bar:** Contains 's&p' (labeled a).
- Refine Search:**
 - Category:** Equities OR Investment Trusts
 - Equities:** 1,857
 - Investment Trusts:** 4
 - Exchange:** Multiple
 - London: 227
 - NYSE Arca: 216
 - Xetra: 132
 - Market:** Multiple
 - United States: 587
 - Ireland: 465
 - Luxembourg: 175
 - Currency:** Multiple
 - United States Dollar: 662
 - Euro: 604
 - United Kingdom Pound: 115
 - Activity:** Multiple
 - Active: 1,158
 - Dead: 703
 - Base Date (Equals/Before):** Multiple
 - 2021: 9
 - 2020: 137
 - 2019: 106
 - Security:** Multiple
- Suggestion:** Showing results filtered to Equities OR Investment Trusts. Did you mean: results from All Categories? (596720 matches)
- Results for s&p (filtered):** 1-15 of 1,861. A table of results is shown below.
- Price - Trade Chart:** A line chart showing the price of S&P Global from 1980 to 2020.
- Standard and Poor's Global:** A table of metadata for the S&P Global index.

Creating your own index: User Created Index (UCI)

The screenshot displays the DFO Navigator application interface, which is used for creating and managing User Created Indexes (UCI). The interface is divided into several sections:

- Search Bar:** Located at the top, it includes a search input field (1), a search button (2), and a search type dropdown (3).
- Filters:** On the left side, there are filters for Category, Exchange, Market, Currency, Type, and Activity. The 'Exchange' filter is set to 'Multiple'.
- Results (filtered):** A table showing search results. The table has columns for Name, Symbol, Hist., Exchange, Market, and a 'Use' checkbox. The 'Use' checkbox is checked for the first five results: APPLE, SAUDI ARABIAN OIL, MICROSOFT, AMAZON.COM, and TESLA.
- Sort By:** A dropdown menu (4) is located at the top right of the results table, showing 'Sort By Name' and other options.
- My Selections (5):** A panel on the right side of the results table, showing a list of selected items. It includes a 'Save As UCI' button.
- Microsoft Details:** A detailed view of the Microsoft stock, showing its Mnemonic (@MSFT), Code (719643), RIC (MSFT.O), T1 Code (MSFT-US), SEDOL (2588173), ISIN (US5949181045), and Local Code (U594918104). It also shows the Latest Value (239.51 USD) and Timespan (13/03/1986 - 02/02/2021, Daily).



Codebook

Refinitiv's cloud-hosted development environment for Python scripting

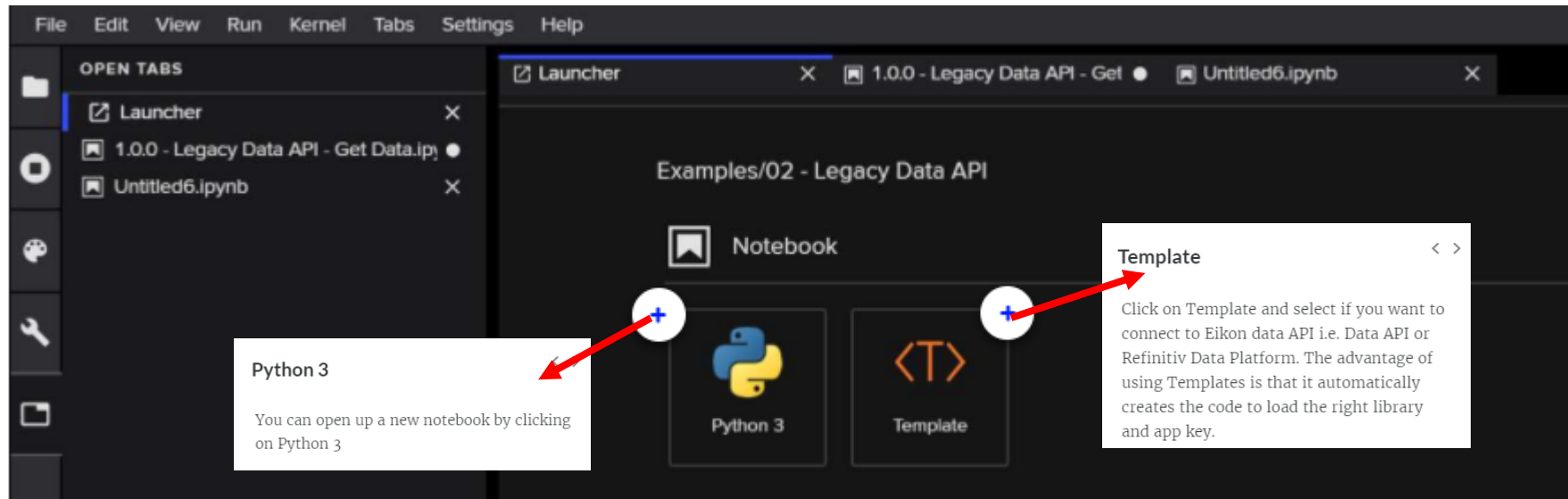


Getting Started with Codebook

Exercise: Retrieve Prices using Get Data

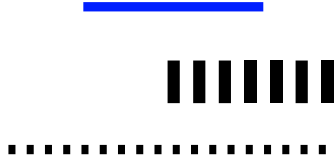
To open Codebook in [Eikon](#):

1. Type **CodeBook** in search to open CodeBook [**CODEBK**]
2. Open a new notebook from the Launcher

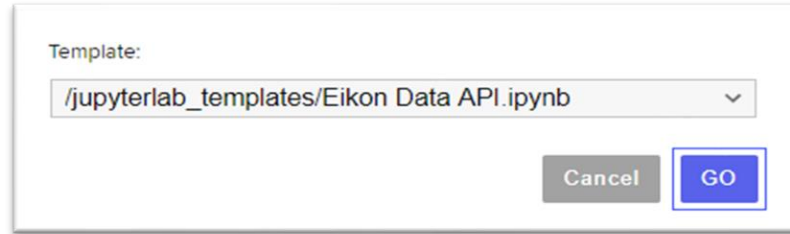


Exercise: Retrieve Prices using Get Data

CODEBOOK



1. Click on Template and select Eikon Data API.



2. Click the Play button to run the API (or Shift-Enter). You should now have an active session.

```
[ ]: import refinitiv.dataplatform.eikon as ek  
  
ek.set_app_key('DEFAULT_CODE_BOOK_APP_KEY')  
...
```

3. Next, let's retrieve some prices. If you are unfamiliar with coding, RIC codes and data field names the easiest way to create the code is either using [CodeCreator](#) (more about this later) or [copy code from the examples folder](#).

For this example, we are going to copy code from the examples folder.

Exercise: Retrieve Prices using Get Data

CODEBOOK

3. Copying the code from the examples folder:

- Open up the examples folder and navigate to [Eikon Data API](#) folder and [1.0.0 Eikon Data API - Get Data](#).
- Copy the code [for snapshot real-time pricing](#) and paste into the notebook you just created, then run the API.

Snapshot real-time pricing

```
[2]: df, err = ek.get_data(['PEUP.PA', 'EUR=', 'JPY='], [ 'BID', 'ASK' ])
      df
```

- Your notebook should now look like this:

```
[1]: import reinitiv.dataplatform.eikon as ek

      ek.set_app_key('DEFAULT_CODE_BOOK_APP_KEY')
```

```
[2]: df, err = ek.get_data(['PEUP.PA', 'EUR=', 'JPY='], [ 'BID', 'ASK' ])
      df
```

```
[2]:
```

	Instrument	BID	ASK
0	PEUP.PA	15.6250	15.6350
1	EUR=	1.1767	1.1771
2	JPY=	106.7700	106.8000

Exercise: Retrieve Prices using Get Data

CODEBOOK

4. Now, let's explore some of the other functionalities inside CodeBook. Let's start with [changing some of the instruments and fields](#).
- Use the **CRTL + SPACE** to search for instruments or fields. *Example: replacing the two currencies with BMW and Ford.*

```
[1]: import reinitiv.dataplatform.eikon as ek

ek.set_app_key('DEFAULT_CODE_BOOK_APP_KEY')
```

```
[2]: df, err = ek.get_data(['PEUP.PA', 'BMWG.DE', ''], [ 'BID', 'ASK'])
df
```

[2]:

	Instrument	BID	ASK
0	PEUP.PA	15.6250	15.6350
1	EUR=	1.1767	1.1771
2	JPY=	106.7700	106.8000

☒ Instruments ☐ Fields

ford

CMP	Ford Motor Co Public Company - United States - F - Listed	F
CMP	Ford Otomotiv Sanayi AS Public Company - Turkey - FROTO - Listed	FROTO.IS
CMP	China Fordoo Holdings Ltd Public Company - China (Mainland) - 2399 - Listed	2399.HK
CMP	City Auto Corp (City Ford) Public Company - Vietnam - CTF - Listed	CTF.HM

Exercise: Retrieve Prices using Get Data

CODEBOOK

5. Next, use the same functionality to add the fields **volume** and **close price**. The code should look like this:

```
[1]: import reinitiv.dataplatform.eikon as ek
ek.set_app_key('DEFAULT_CODE_BOOK_APP_KEY')
```

```
[3]: df, err = ek.get_data(['PEUP.PA', 'BMWG.DE', 'F'], [ 'BID', 'ASK', 'CF_VOLUME', ])
df
```

[3]:

	Instrument	BID	ASK
0	PEUP.PA	15.665	15.67
1	BMWG.DE	59.030	59.05
2	F	7.270	7.33

note the use of Fields vs. Instruments

☐ Instruments ☒ Fields ?

FLD	Close The last trade price, settlement value or closing value.	CF_CLOSE
FLD	Price Close The latest available closing price. If there are no trades for the most rec...	TR.PriceClose
FLD	Close Price Last trade price or value.	TR.CLOSEPRICE
FLD	Close Bid Spread Bid close spread	TR.CLOSEBIDSPREAD

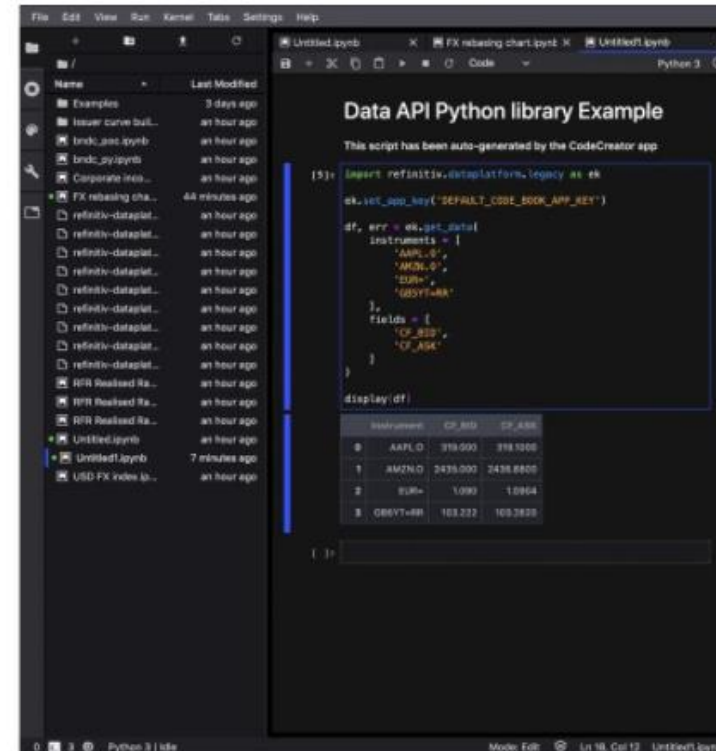
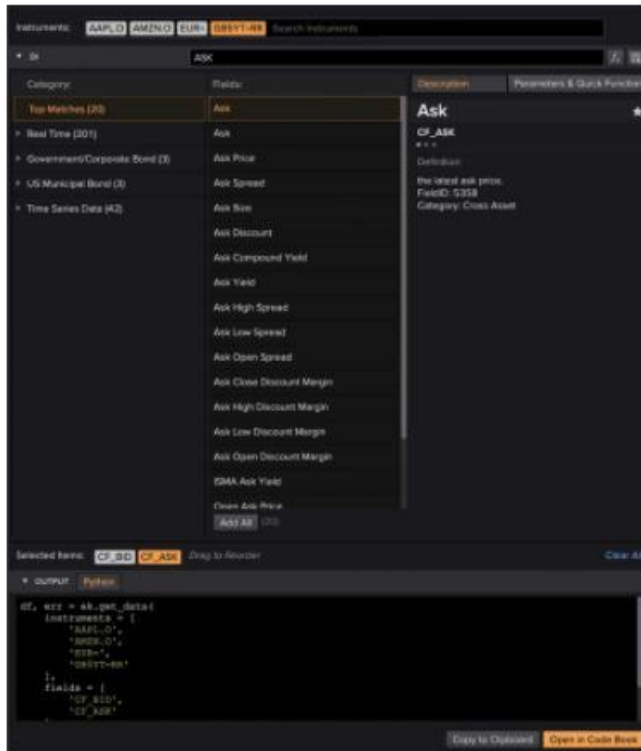
Getting started with CodeCreator

Exercise: Retrieve Prices using Get Data

If you do not have much Python experience or if you have never used the Data API, you can use the [CodeCreator](#) app to build a sample data API request. [CodeCreator](#) has the same UI as the Refinitiv Excel formula builder and can generate Python snippets for you and open them in [CodeBook](#).

Two Ways:

1. By copying the code (Click **Copy to Clipboard**) and pasting the code into an existing notebook
2. By creating a new notebook by clicking **Open in Codebook**.

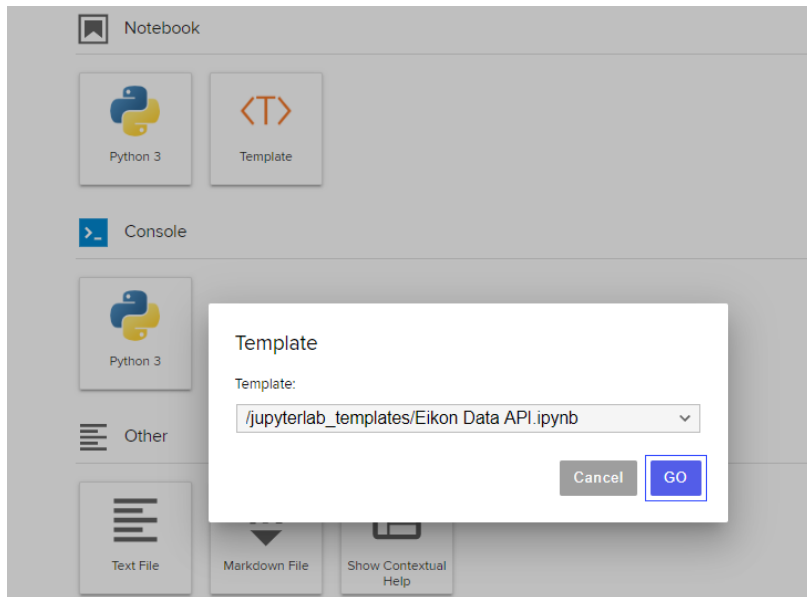


Exercise: Retrieving data using CodeCreator

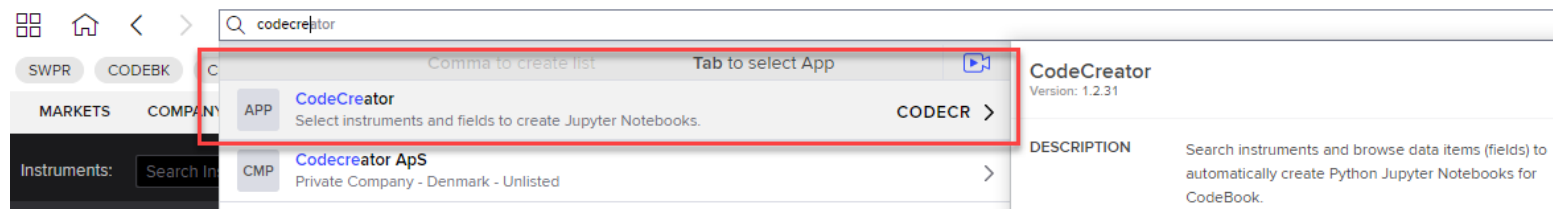
CODECREATOR

In this exercise we will retrieve snapshot data for Dow Jones index using CodeCreator and copying the code to an existing notebook.

1. Open up a new template from the Launcher. Select Eikon Data API and run to activate the session.



2. Use [Eikon/Workspace](#) search to find **CodeCreator**.



Exercise: Retrieving data using CodeCreator

CODECREATOR

3. Populate the **Instruments** section with the chain for Dow Jones index. *Note: use the chain RIC to retrieve the constituents rather than the index itself.*

Instruments:	dow jones chain
DATA ITEMS	Top Hit
	0#.DJI Dow Jones Industrial Average Index - Equity Index - New York Stock Exchange - USD
Category:	Indices

4. Under **Data Items**, select **last** and **close price** and **ISIN**.

Instruments: 0#.DJI Search Instruments	
DATA ITEMS isin	
Category:	Fields:
Top Matches (7)	ISIN Code
Real Time (1)	ISIN CODE
Reference & Identifiers (1)	Revenue from Business-Related Activities - Other - Total
Company Fundamentals (5)	Islamic Income
	Sales of Goods & Services - Gross
Description	
Parameters & Quick Functions	
ISIN Code	
TR.ISINCode	
Definition:	
International Securities Identification Number. Issued by the International Securities Organisation.	
Category: Identifiers	

You will see the code at the bottom of **CodeCreator**. It should be:

```
df, err = ek.get_data(
    instruments = ['0#.DJI'],
    fields = [
        'CF_LAST',
        'CF_CLOSE',
        'ISIN_CODE'
    ]
)
display(df)
```


Exercise: Retrieving data using CodeCreator

CODECREATOR

- 5. Click on [Copy to Clipboard](#).
Open up your notebook and paste the code, then run the code. The result should look like this:

```
[1]: import refinitiv.dataplatform.legacy as ek
import datetime

ek.set_app_key('DEFAULT_CODE_BOOK_APP_KEY')

[4]: df, err = ek.get_data(
    instruments = ['0#.DJI'],
    fields = [
        'CF_LAST',
        'CF_CLOSE',
        'ISIN_CODE'
    ]
)

display(df)
```

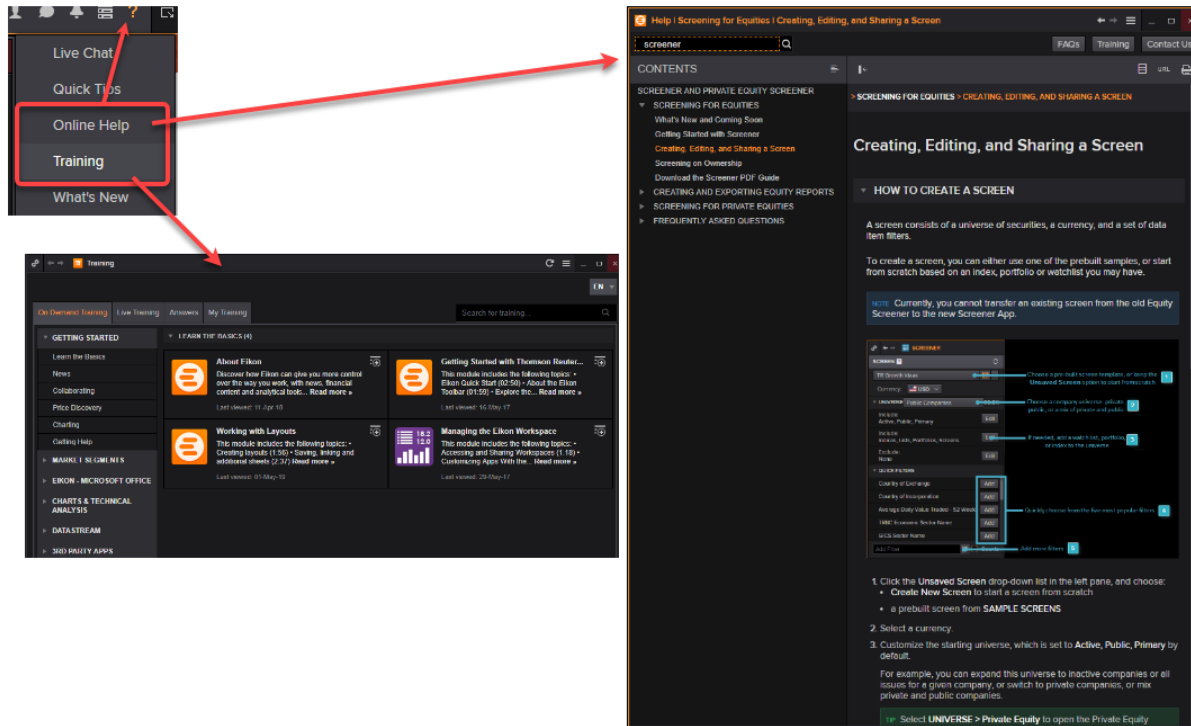
	Instrument	CF_LAST	CF_CLOSE	ISIN_CODE
0	GS.N	203.42	203.42	US38141G1040
1	NKE.N	99.51	99.51	US6541061031
2	CSCO.OQ	45.16	45.16	US17275R1023
3	JPM.N	96.75	96.75	US46625H1005
4	DIS.N	115.92	115.92	US2546871060
5	INTC.OQ	60.09	60.09	US4581401001
6	DOW.N	41.74	41.74	US2605571031
7	MRK.N	76.75	76.75	US58933Y1055
8	CVX.N	91.59	91.59	US1667641005
9	AXP.N	99.44	99.44	US0258161092
10	VZ.N	55.66	55.66	US92343V1044
11	HD.N	249.16	249.16	US4370761020



Resources & Certification



On Demand Training videos & Online Help

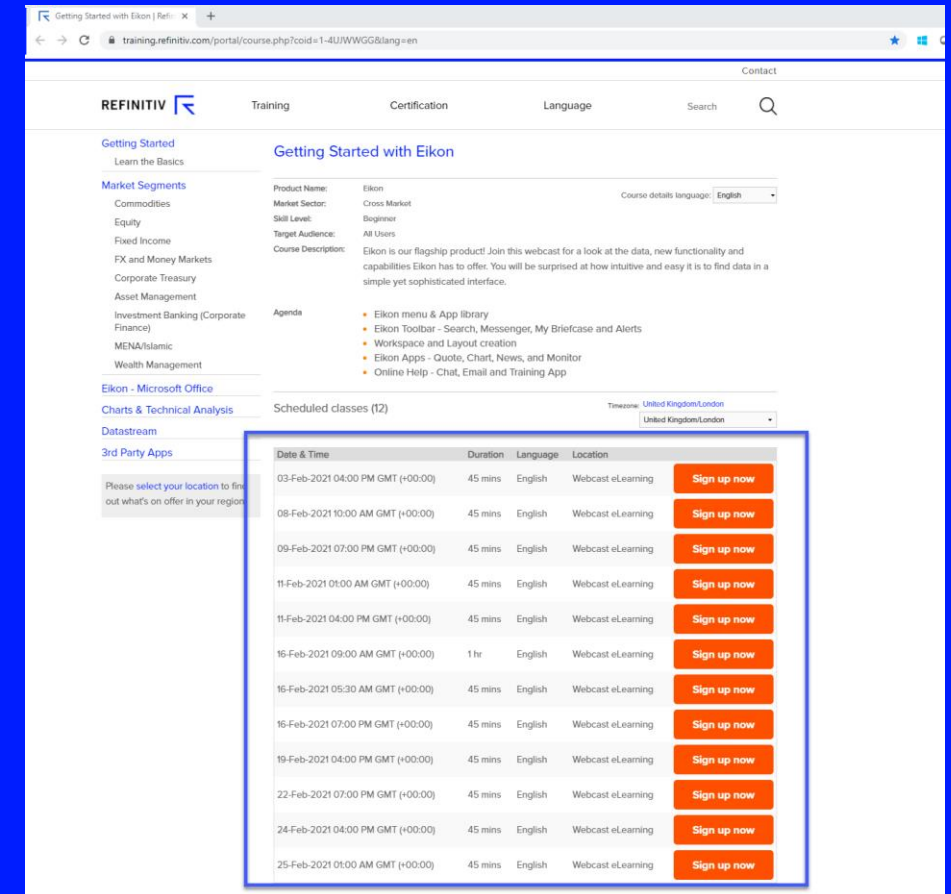


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Thank you