FTSE Russell

FTSE Russell's ESG Ratings and FTSE Green Revenues data models

Step by step user guide v3

December 2017

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FTSE Russell

Product suite for Sustainable investment

FTSE Russell Product suite for Sustainable Investment



Environmental, Social and Governance data model > How do companies operate?

- ✓ Easy identification of companies with strong / weak ESG practices
- ✓ Search, screen and analyze the ESG ratings of over 4,100 companies
- ✓ Portfolio and index foot printing for ESG Ratings
- √ Rapid design and upload of ESG portfolios or baskets
- ✓ Understand ESG 'hotspots' across sectors and countries
- ✓ Input ESG portfolios into the client platform (QSD)



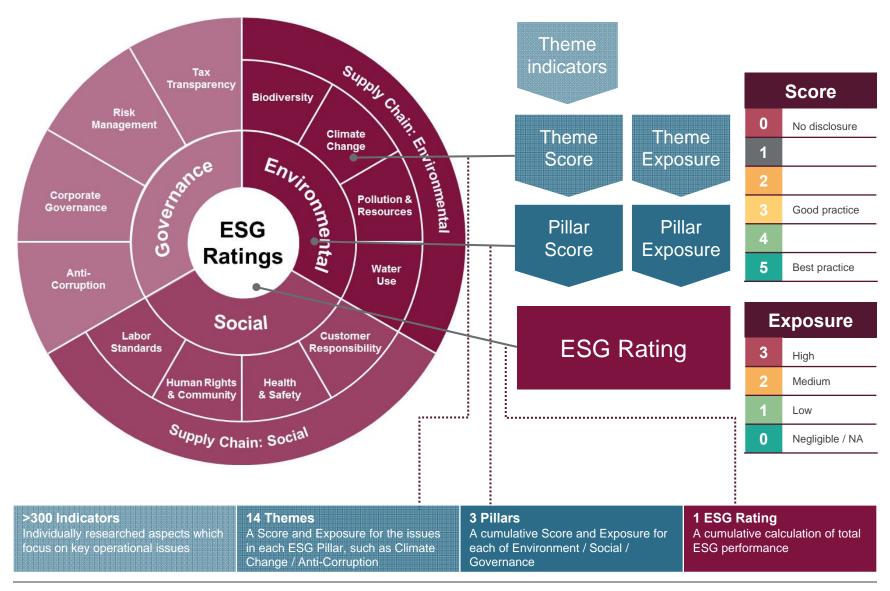
Green Revenues data model > What do companies manufacture?

- ✓ Easy identification of companies with green revenues
- ✓ Detailed 8 year green revenues history of c14,000 large, mid and small cap companies
- ✓ Portfolio and index foot printing for green revenue exposure
- ✓ Rapid design and upload of green portfolios or baskets
- ✓ Understand Green Revenues 'hotspots' with attribution analysis compared with an index or another uploaded portfolio
- ✓ Maintain representative Green Revenues portfolios in the client web platform (QSD), updated on a daily basis

What you need to know before accessing the QSD platform

Environmental, Social and Governance (ESG) data model framework

ESG - How do companies operate?



How the ESG Ratings are used to construct the FTSE4Good Index Series

- The ESG Ratings are used to determine the constituents of the FTSE4Good Index Series
- The <u>Overall</u> ESG Rating is the measure used for inclusion threshold
- A "buffer" threshold was introduced to reduce the volatility of constituents in the index series
- These thresholds are likely to converge over time
- Companies not meeting the lower threshold are given a period of time to improve before their removal

	Developed markets	Emerging markets
Companies newly included in the Index	ESG Rating of 3.1 or higher	ESG Rating of 2.5 or higher
Companies removed from the Index	ESG Rating lower than 2.7	ESG Rating lower than 2.1
Source: FTSE Russell as of December 2017.		

What you need to know before accessing the QSD Platform

FTSE Green Revenues data model framework

Capturing company activities

A simple but consistent classification of goods, products or services

Applicability of the FTSE Green Revenues Data Model is dependent on:

The goods, products or services a company manufactures or provides

The impact, if any, that the goods, products or services provided have on the environment, such as

- Adapt
- Mitigate
- Remediate

The result of the goods, products or services impact on the environment, such as

- Climate Change
- Resource Depletion
- Environmental Erosion

Each and every revenue earning activity is taken into consideration

FTSE Green Revenues data model

FTSE Green Revenues Classification System (GRCS)

Detailed below is the core FTSE Green Revenues Sector & Subsector classification model derived from the review and classification of a company's activities.

In accordance with the decisions of the ICB Committee, these groupings have been established to represent the most effective structural framework for capturing the industrial transition to the Green Economy. This will not be a static model due to the dynamic changes occurring within global commerce.

	Energy Generation	Energy Equipment	Energy Management	Energy Efficiency
01	EG Bio Fuels	EQ Bio Fuels	EM Combined Heat/Power	EE Advanced Materials
02	EG Clean Fossil Fuels	EQ Clean Fossil Fuels	EM Controls	EE Building and Property
03	EG Geothermal	EQ Geothermal	EM Fuel Cells	EE Industrial Processes
04	EG Hydro	EQ Hydro	EM Integrated EM	EE Integrated EE
05	EG Integrated EG	EQ Integrated EG	EM Logistics and Support	EE IT Processes
06	EG Nuclear	EQ Nuclear	EM Power Storage	EE Lighting
07	EG Ocean and Tidal	EQ Ocean and Tidal	EM Smart Grids	EE Video Conferencing
08	EG Solar	EQ Solar		
09	EG Waste to Energy	EQ Waste to Energy		
10	EG Wind	EQ Wind		

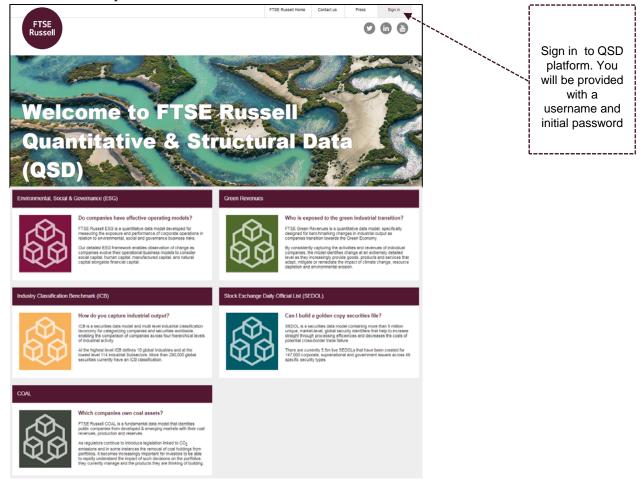
	Environmental Infrastructure	Environmental Resources	Modal Shift	Operating Shift
01	El Carbon Capture & Storage	ER Agriculture	MS Aviation	OS Finance/Investment
02	El Desalination	ER Aquaculture	MS Integrated MS	OS Integrated OS
03	El Flood Control & Land Erosion	ER Integrated ER	MS Railways	OS Retail/Wholesale
04	El Integrated El	ER Mining	MS Road Vehicles	OS Property
05	El Logistics and Support	ER Minerals and Metals	MS Shipping	
06	El Pollution Management	ER Source Water		
07	El Recyclable Products	ER Sustainable Forestry		
08	El Recycling Services			
09	El Waste Management			
10	El Water Management			

ESG and FTSE Green Revenues data model Navigation on QSD platform

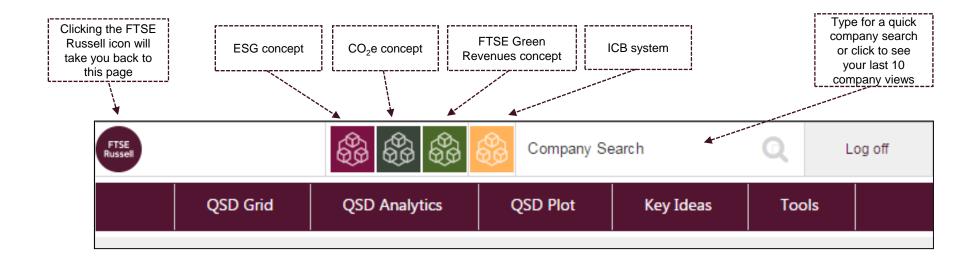
Login through Quantitative Structural Data (QSD) platform

https://qsd.ftserussell.com

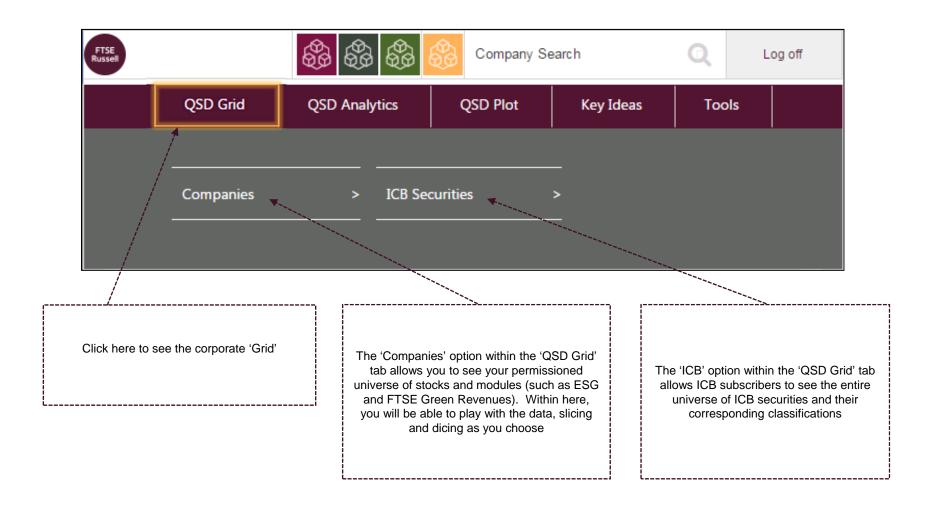
Web-based and accessible on desktop or devices



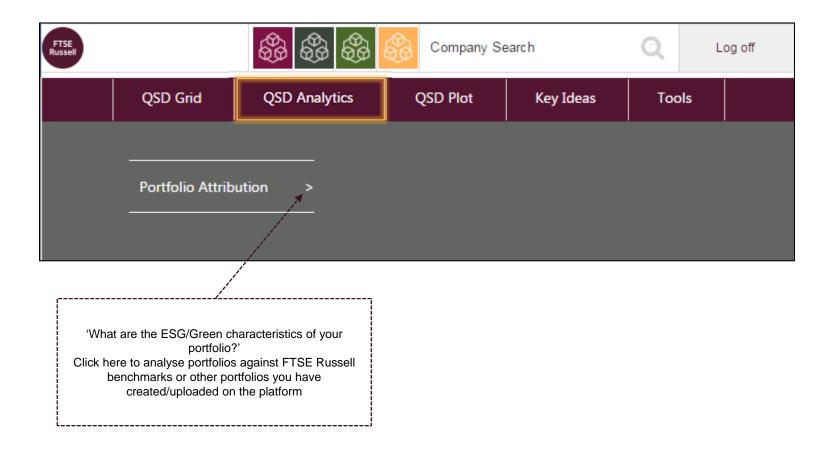
Navigation Bar



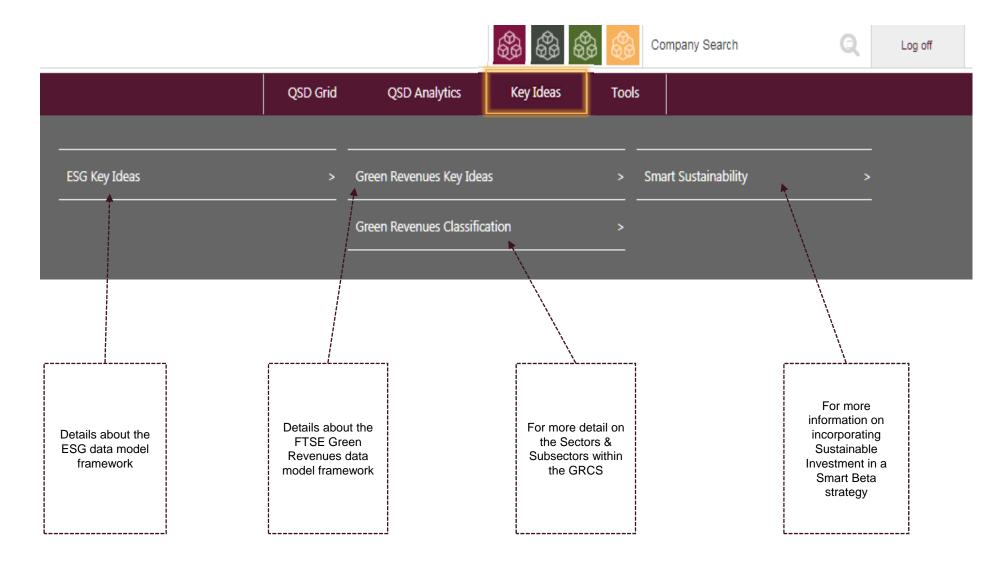
Toolbar - QSD Grid



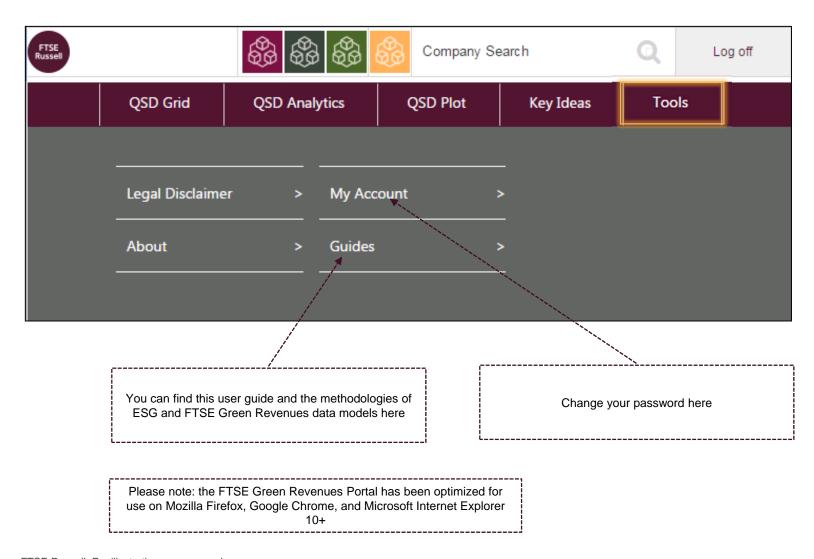
Toolbar – QSD Analytics



Toolbar – Key Ideas



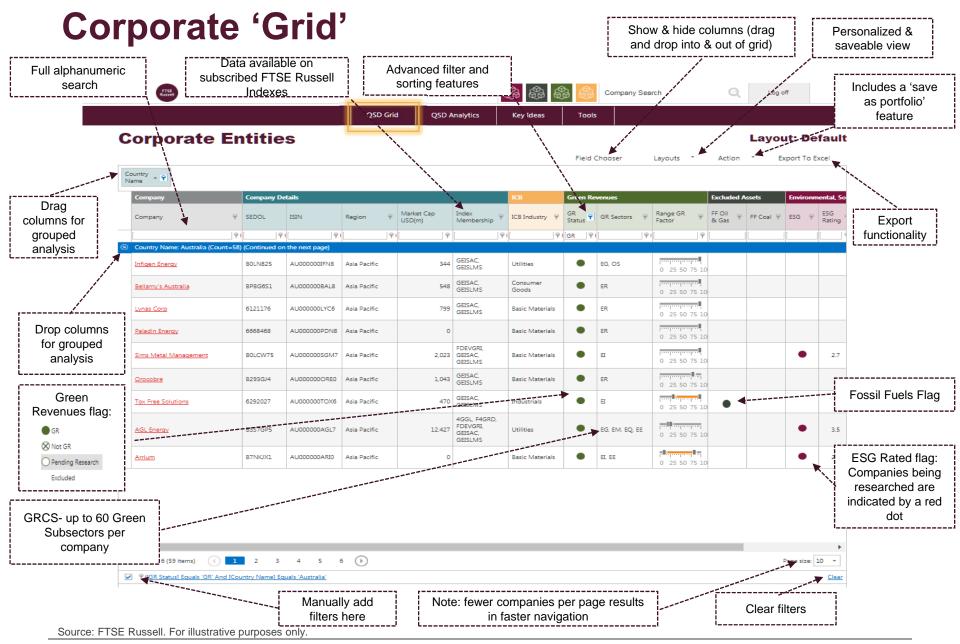
Toolbar - Tools



Source: FTSE Russell. For illustrative purposes only.

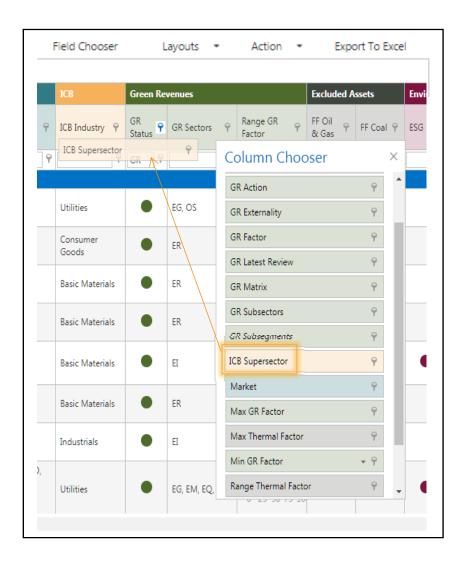
QSD platform

Grid manipulation and functions



Field Chooser

- Click on Field Chooser and a drop-down box appears that allows users to hide and/or show data panels and columns
- To add a column to the grid:
 Drag the field from the field chooser and drop it to the grid
- To remove a column from the grid:
 Drag the field from the grid and drop it on the field chooser
- Note that fields can only be added to the same color-coded Data Panel

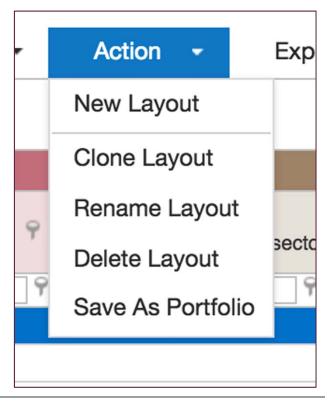


Layouts

 A Layout is a collection of Grid functions applied to the data that you previously saved

Action

- New Layout
 - You have to click on "New Layout" before doing grid manipulation, if not changes will be saved under current layout
- Clone Layout
- Rename Layout
- Delete Layout
- Save as a Portfolio



Export to Excel

Data can be exported into Excel, subject to the necessary license being in place

ESG S Score

4.7

4.5

3.8

2.4

1.2

0.5

0.1

Data is exported as it is in the grid layout

ESG Rating

4.9

3.9

3.7

2.1

1.8

0.8

0.8

ESG E Score

5.0

4.5

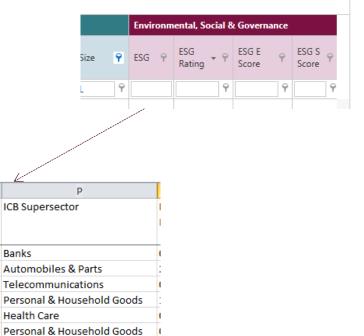
3.2

2.4

2.8

1.2

0.0



Action

Layouts

Export To Excel

Source: FTSE Russell. For illustrative purposes only.

Index Membership

4GGL, GEISAC

4GGL, GEISAC

4GGL, GEISAC

GEISAC

GEISAC

GEISAC, Ex4GGL

GEISAC, Ex4GGL

Α

Company

2 Company A

3 Company B

4 Company C

5 Company D

6 Company E

7 Company F

8 Company G

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M

Banks

Real Estate

ESG G Score

5.0

2.9

4.0

1.6

1.2

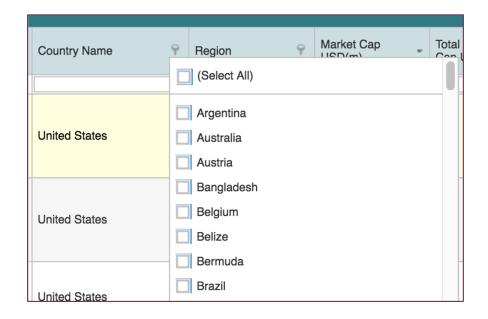
1.0

2.3

Grid functions – categorical filtering

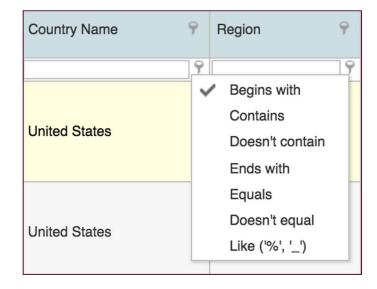
- Click on the 'filter funnel' in the column heading.
 - Headings without a 'filter funnel' do not have the categorical filtering functionality
 - The 'filter funnel' is dynamic on the Company column, becoming active when there are 250 companies or less, visible in the grid
- A drop-down check box will appear
- Select single (or multiple) choices of category that the data in the column can take
- Check the 'Select All' box if all the entries are required
- System efficiency and screen refreshment are improved if 'Select All' is de-activated if all the entries are required





Grid functions – selection filtering

- Click on the 'filter funnel' in the row below column heading
- Select the filtering method required
- Enter the value in the box beside the 'filter funnel'
- The software will automatically detect whether the column contains numeric of alphanumeric data and display the relevant filtering methods

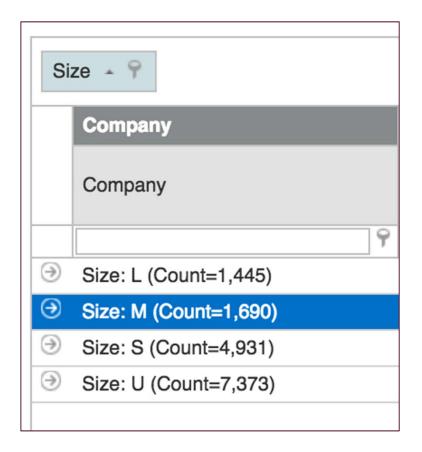




Source: FTSE Russell. For illustrative purposes only.

Grid functions – grouping and sub-grouping

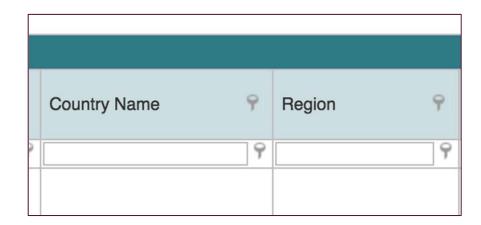
- Data can be grouped by dragging and dropping a column heading to the top left-hand corner of the Grid
- Drag further column headings to create sub-groups
- The order of the columns determines the group/ sub-group order
- The group/ sub-group can be opened up by clicking on the arrow at the lefthand end of the row



Source: FTSE Russell. For illustrative purposes only.

Grid functions – sorting

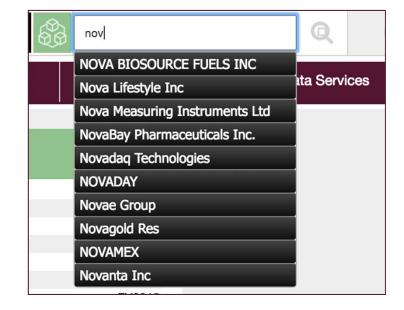
- Data in columns can be sorted by clicking on the column heading
- For a numeric column click once and the sort is 'Low' to 'High'; click again and the sort is 'High' to 'Low'
- For an alphanumeric column click once and the sort is 'A' to 'Z'; click again and the sort is 'Z' to 'A'
- For a multiple sort, repeat the above process whilst also holding the 'Shift' key



Company data – summary

- The Company View for data in respect of an individual company can be found by either –
 - using the link in the Grid view; or
 - by searching the database with company name



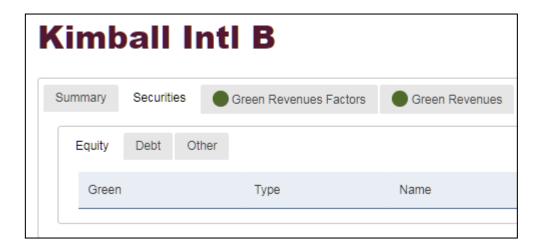


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Source: FTSE Russell. For illustrative purposes only.

Company data – Securities

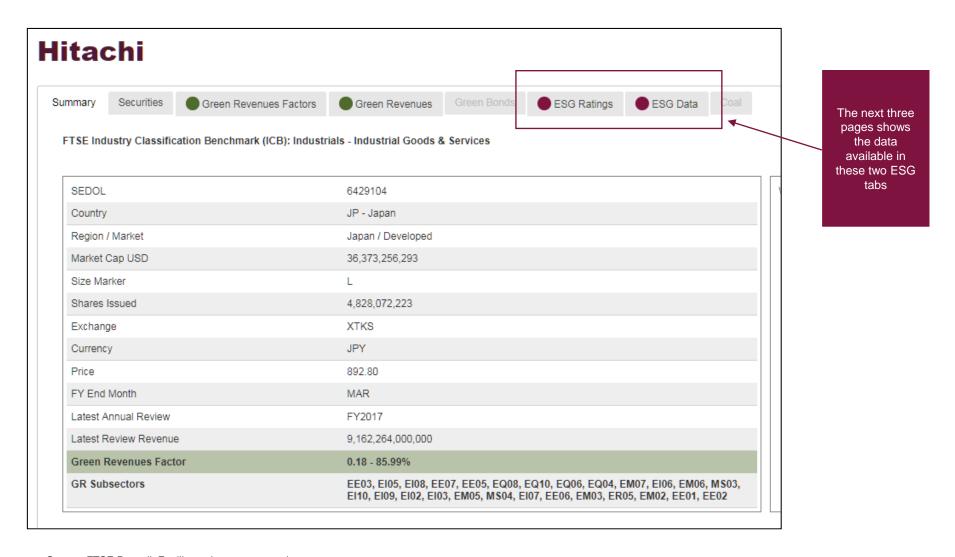
 A high level description of the company, its ICB classification, market value, revenues fiscal year end etc.



Source: FTSE Russell. For illustrative purposes only.

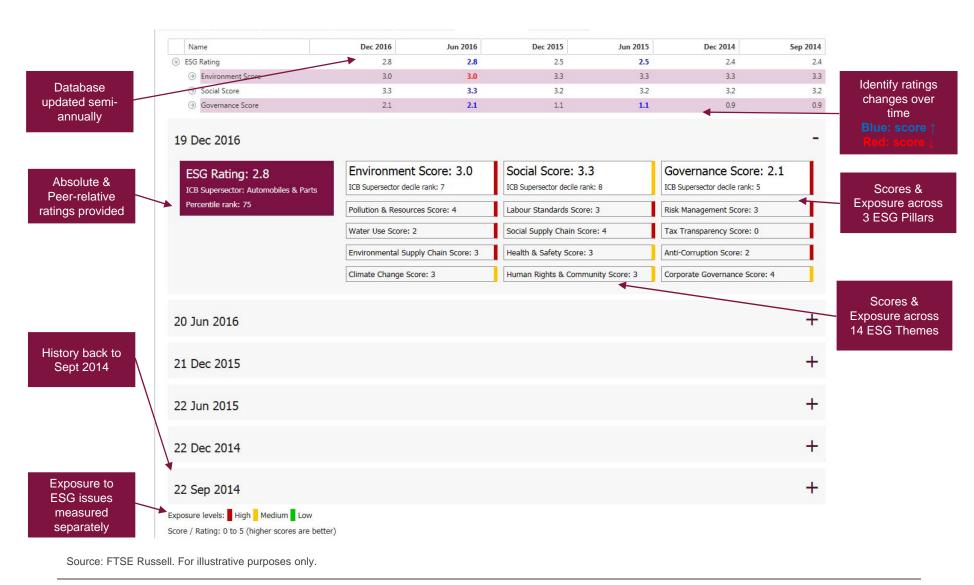
User guide to the ESG data model

Example on ESG data - Hitachi

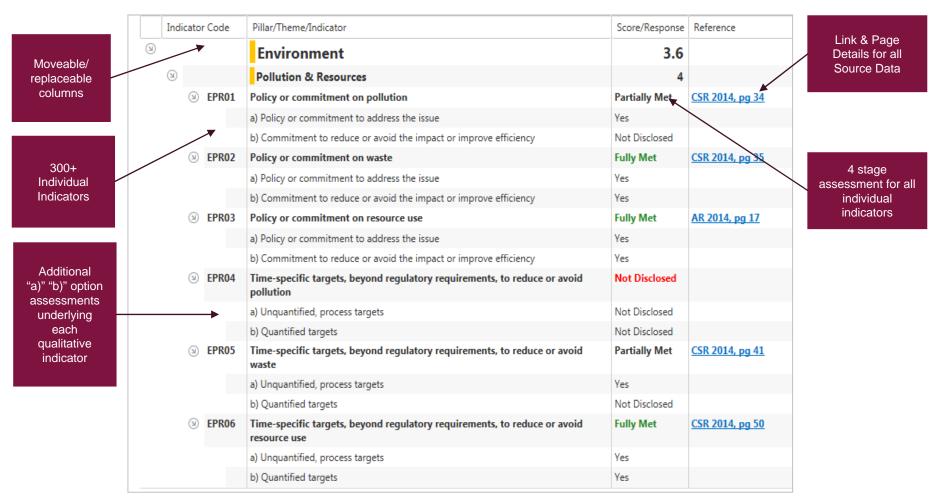


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ESG Ratings tab – Scores and Exposure

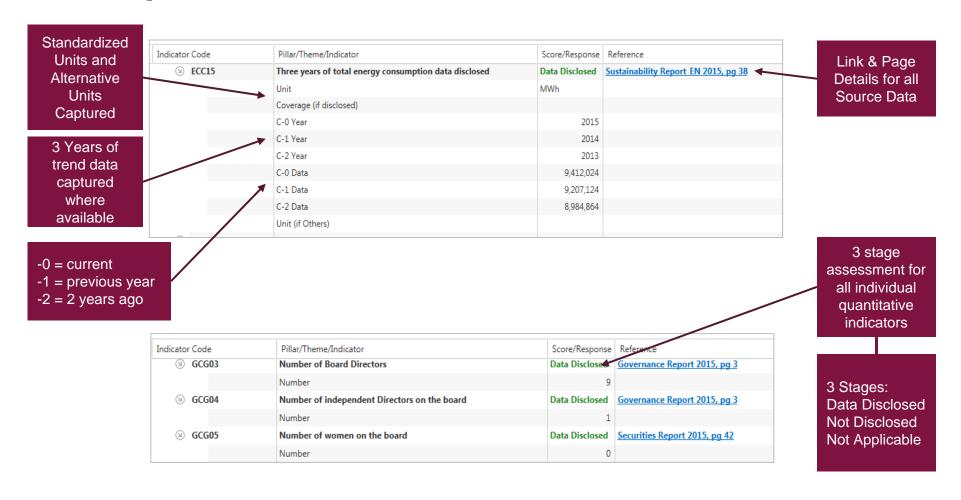


ESG data tab - access to underlying indicators



Source: FTSE Russell. For illustrative purposes only.

Additional functions under quantitative data points

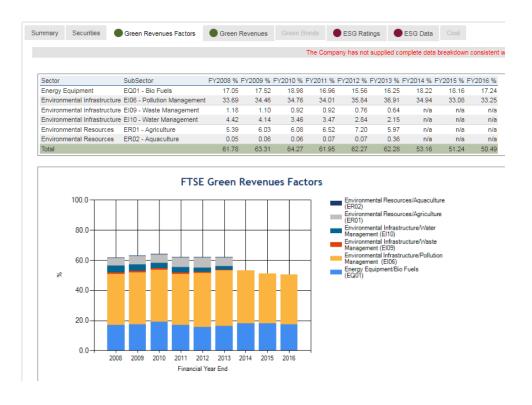


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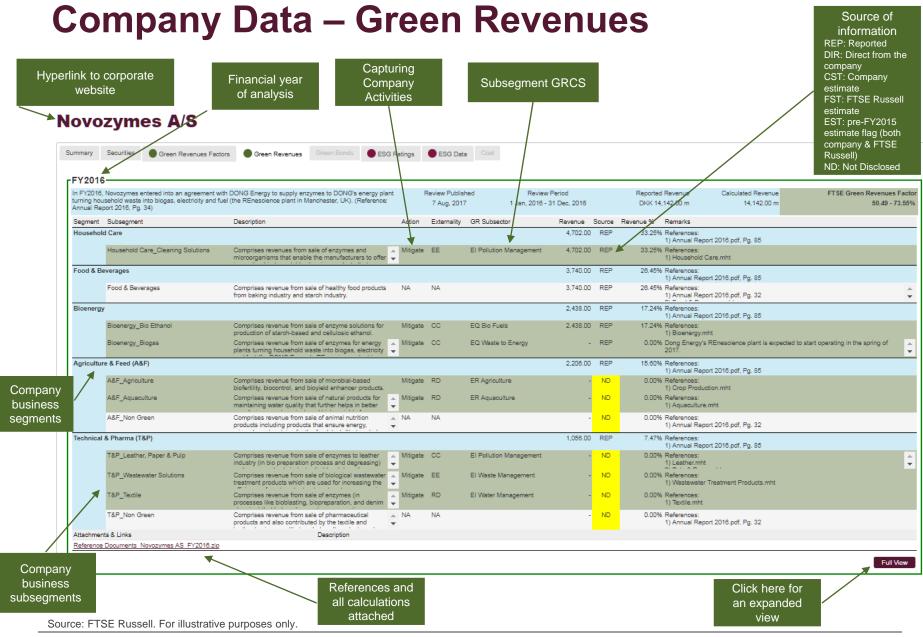
User guide to the FTSE Green Revenues data model

Company data – FTSE Green Revenues factors

- A summary of the level of green revenues exposure
 - how it has changed over time
 - the time-varying breakdown by GRCS subsector
- Outline of subsector activity against the GRCS
- Note that this is only available when the company has disclosed its subsegment revenues



Source: FTSE Russell. For illustrative purposes only.



Portfolio attribution

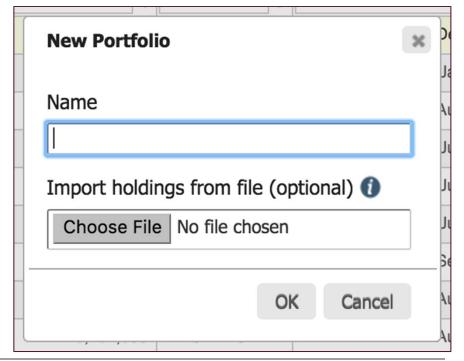
Creating a portfolio

- Portfolios and baskets can be analyzed to investigate their structure
- 'Green revenue' and 'ESG' foot prints can be calculated both in absolute values and relative to a FTSE Russell index or another portfolio that has been uploaded
- Portfolios can be created by:
 - Uploading from Excel
 - Saving a Portfolio from Grid
 - Manual input
- Portfolios created by users are confidential to them
 - Portfolios cannot be shared with colleagues or viewed by other system users

Uploading a portfolio

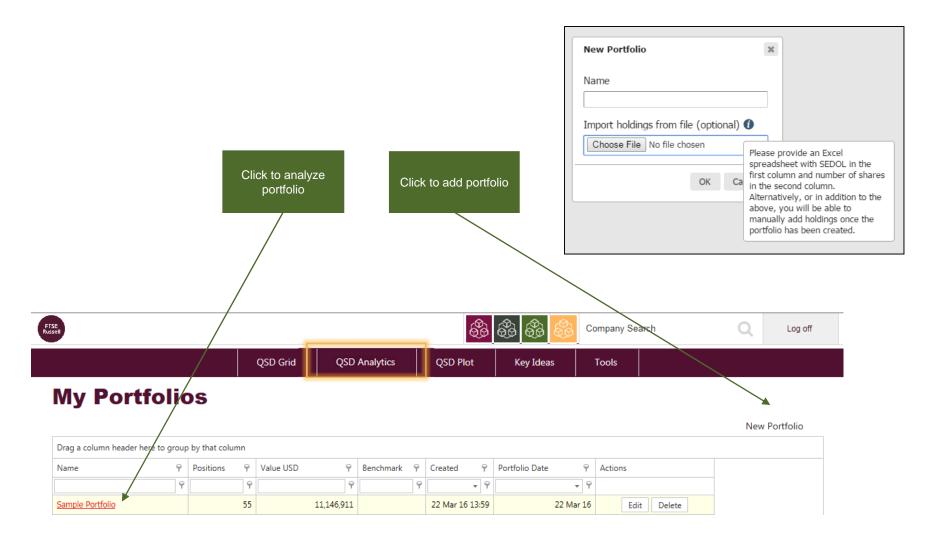
- Portfolios can be created by uploading data from Excel
- Format of file is data in columns A and B; portfolio positions are in the rows – one per row
- 7-digit SEDOLs are in column A; number of shares are in column B
- Headers are required in Row 1
- Select QSD Analytics | Portfolio Attribution | New Portfolio to start the portfolio upload

4	Α	В
1	SEDOL	Shares
2	5069211	93,700
3	5727973	72,122
4	4846288	69,255
5	5529027	71,036
6	5086577	64,108
7	4598589	23,886



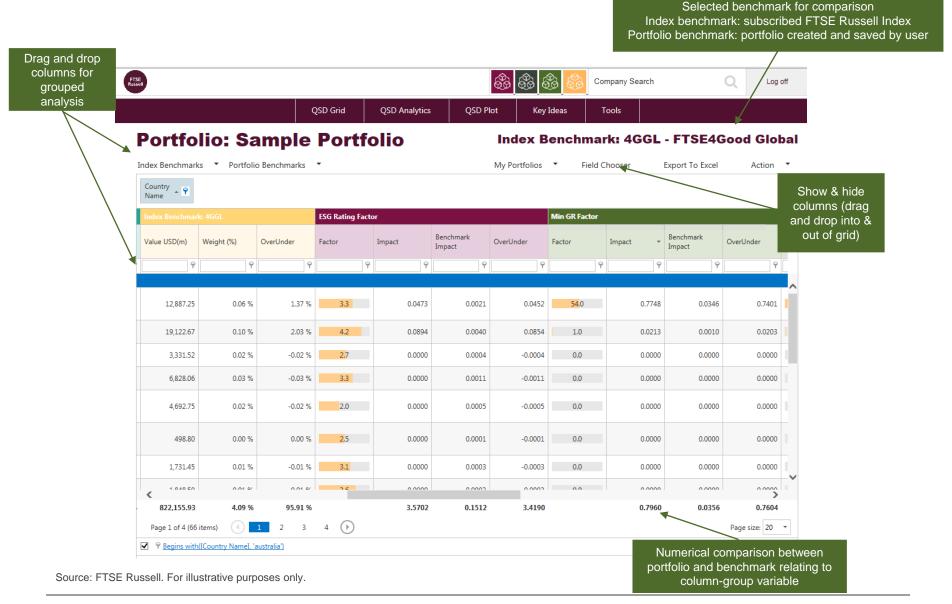
Source: FTSE Russell. For illustrative purposes only.

Portfolio attribution



Source: FTSE Russell. For illustrative purposes only.

Portfolio attribution continued





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FTSE Russell index expertise and products are used extensively by institutional and retail investors globally. For over 30 years, leading asset owners, asset managers, ETF providers and investment banks have chosen FTSE Russell indexes to benchmark their investment performance and create investment funds, ETFs, structured products and index-based derivatives. FTSE Russell indexes also provide clients with tools for asset allocation, investment strategy analysis and risk management.

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