Instructions for using the JEGR Relational Database

1   Introduction

The JEGR relational database is a tool aimed at providing information about the similarities and differences between a set of European statistical and supervisory reporting frameworks.

The basis of the database is the modelling of the reporting requirements according to a unique data dictionary and methodology, the data point model (DPM), which was developed and published by the European Banking Authority (EBA). In order to have all the information according to that dictionary, the ECB's Balance Sheet Items (BSI) and Monetary Interest Rates (MIR) framework needed to be modelled in line with this[1].

If a set of reporting templates is modelled according to the same methodology and dictionary, the similarities and differences between them can be revealed implicitly by the common modelling framework. To exploit this possibility, the JEGR relational database contains a set of predefined queries and user-friendly forms.

The DPM methodology consists of two layers: the dictionary layer and the framework layer. The former contains all the concepts defined and their internal relations (dimensions, domains, members and hierarchies). The latter includes the reporting requirements (in the form of tables, axes and data points) and the description of these requirements according to the dictionary.

The JEGR relational database covers the frameworks included in the draft implementing technical standards (ITS) on supervisory reporting developed by EBA[2], as well as balance sheet items and monetary interest rates from the ECB.[3]

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[1] The DPM modelling of balance sheet items and monetary interest rates is not an official definition of the reporting requirements and has been performed solely for the purposes of the JEGR relational database.

[2] http://ec.europa.eu/internal_market/bank/regcapital/legislation_in_force_en.htm#implementing

[3] http://www.ecb.europa.eu/ecb/legal/1005/1021/html/index.en.html
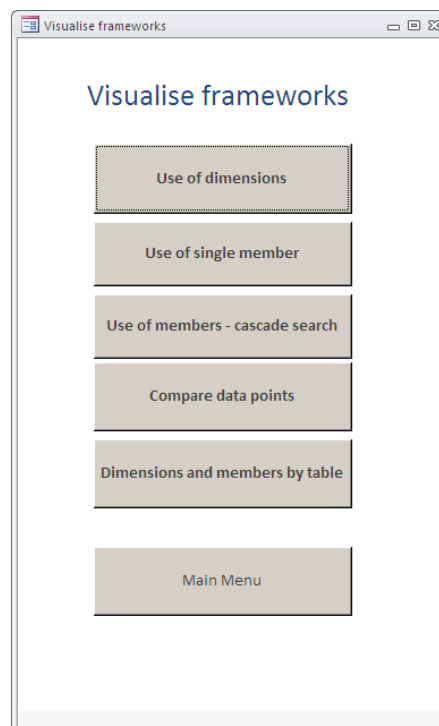
2   Home menu

The JEGR relational database opens by bringing up the *"Home"* form, the entry point to all the options provided by the tool.

3   Visualise frameworks menu

The *"Visualise frameworks"* form is a sub-menu containing all the predefined queries related to the framework layer. Closing the form returns the user to the "Home" form.

3.1 Use of dimensions query

This predefined query is aimed at providing information on the use of a selected dimension in the different frameworks. Select a dimension in the first combo box and the rest of the fields will automatically be filled with information.

The list box "Tables list" contains all the tables in which the selected dimension applies. Select any table to modify the content of the other list boxes. The tables can also be exported to Excel by double-clicking on the rows of the list box.

The list box "Axis and member" shows the axes of the table selected in the "Tables list", which contains the dimension and the member associated with that axis. Axis "Y" represents a row, while "X" represents a column. By double-clicking on one of the axes, a new window is shown with the complete definition of that axis (i.e. the label and all the dimensions and members that apply to it).

The list box "Members used in the table" lists the members used in the selected table without repetitions and regardless of the axes (in technical terms, it is a SELECT DISTINCT clause). This list represents the sub-domain of values that are applied to the selected template.

4 Use of single member query

This predefined query provides information on the use of a selected dimension-member pair. The query makes use of the hierarchies, thereby gathering information on the members related to the one selected via a hierarchy.

The check box "Restricted list" reduces the number of members available for the dimensions related to the domain "Main category". This list includes only a very basic classification of financial instruments, such as:

- loans and advances;
- debt securities;
- equity instruments;
- derivatives;
- off-balance sheet items;
- deposits;
- debt securities issued;
- short positions.
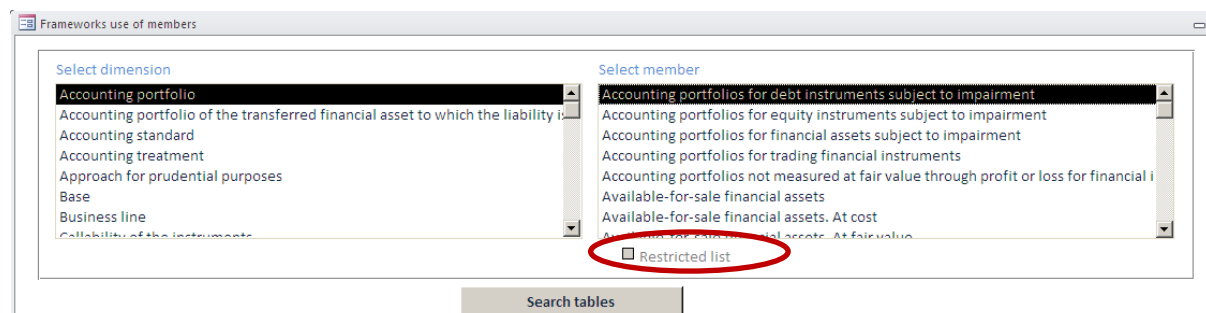
Select a dimension and member from the list boxes at the top and click on "Search tables", whereupon the list boxes "Tables found" and "Hierarchies" will return the results.

The list box "Tables found" indicates the tables using the selected dimension-member pair or the selected dimension with a member related to the one selected by a hierarchy. An "X" in the "Dir" column means that the selected member themself is applied in the table, an entry in the "Par" column reveals that a parent of the selected member is applied, while the "Ch" column means that a child of the selected member is applied.

Select any of the tables and the rest of the list boxes will be filled. Exporting to Excel is also possible by double-clicking on the rows of the list box.

The list box "Direct relationship" shows the axes of the table that contains the dimension and the member selected. Axis "Y" represents a row, while "X" represents a column. By double-clicking on one of the axes, a new window with the full definition of that axis is shown (i.e. the label and all the dimensions and members that apply to it). The list boxes "Children" and "Parents" show the axes in which a member related to the selected member against a hierarchy is used, as well as the concrete member. It is also possible to check the whole definition of an axis by double-clicking on it.

Clicking on "Search tables" fills the list box "Hierarchies" with the hierarchies in which the selected member is included. When a parent or child member is selected in the "Children" or "Parents" list boxes, there will potentially be three different categories of hierarchy. The second column may show three different values: "Selected member" means that the hierarchy applies only to the member originally selected (in the "Select member" list box), "Found member" means that the hierarchy applies only to the member selected in the list box "Children" or "Parents", while "Both members" means that the hierarchy contains both the selected and found members.

The content of a hierarchy can be visualised by using the "Hierarchies" list box.

4.1   Use of members – cascade search query

This option looks for data points containing a set of dimension-member pairs. This search is performed in a cascading manner in the sense that, when one dimension-member pair is selected, the list boxes for adding a new pair are automatically filtered so that the selection is guided[4].

Select a dimension-member pair from the corresponding list boxes. By clicking on "Add", the pair will be added to the "Selected pairs dimension-member" list box; the "Select dimension" and "Select members" list boxes will be filtered and the "Data points found" list box will show the data points that contain all the dimension-members pairs included in the "Selected pairs dimension-member" list box.

Previously selected pairs can be deleted from the "Selected pairs dimension-member" list box by clicking "Delete" or by clicking "Clear selections" to restart the whole process.

When a row in the "Data points found" list box is selected, the remaining text boxes show the labels of the axes of the data point. The tables can also be exported to Excel by double-clicking on the rows of the list box.

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[4] If there are many data points using a dimension-member pair, Microsoft SQL queries do not allow all the necessary filters to be applied, so the list boxes may not be filtered. However, this situation is very rare and filtering can be carried out normally, with the caveat that undefined dimension-member pairs may be chosen.

4.2   Compare data points query

This function checks the similarities and differences between two data points in terms of common dimension-member pairs.

Select two data points by selecting the framework, table and axes. Once one or two data points have been selected, click on "Compare data points". The list box "Shared pairs dimension-member" will show the pairs that are common to the selected data points. The list box "Non-shared pairs dimension-member" will show the remaining pairs, including in the first column the reference to the data point that contains that pair.

4.3   Dimensions and members by table query

This feature constructs the list of dimensions and members that explicitly apply to one template.

Start by selecting the framework and the table. Once a table is selected, the list box "List of dimensions and members" will show all the members applicable to the template, together with their dimensions. Additionally, the list box "List of dimensions" will show the dimensions that apply. By selecting one of the dimensions, the list box "Associated members" will show the members that apply to the selected templates and dimensions.

4.4   Visualise dictionary form

This form navigates through the dictionary layer. The form contains one list box for each concept of the dictionary ("Domains", "Dimensions", "Members" and "Hierarchies"). By selecting any of the items, the rest of the list boxes are automatically filtered.

When selecting a dimension, the "Members" list box only shows those members that are used in conjunction with that dimension in any of the reporting frameworks[5]. This means that, in practice, a framework component is used for visualising the dictionary. The reason for this is that the full set of possible members can be obtained by selecting the domain, so this option provides additional useful information.

For "typed" domains (i.e. domains without a closed set of values), the "Members" list box will not have any value.

The user can also navigate to a separate part of the dictionary that has been set aside for a specific reporting framework. This can be done via the list box "Filter by frameworks".

5 Export menu

This menu allows information to be exported to Excel files. There are three different export options.

5.1 Export tables form

Tables can be exported by selecting them from the list box. It is also possible to filter the list of tables by reporting framework.

5.2 Export matrix form

The analysis matrix file published by the EBA may also be exported. The JEGR is publishing an Excel template for this export option so that users can obtain an output file that is the same as the one published by the EBA. The file is called "DPM analysis matrix - template.xltm" and should be stored in the same folder as the database. If the file is not stored there or has a different name, an error message will appear warning that the file was not found and the application will generate the file in a blank Excel sheet. The functionalities provided by the EBA will not be available in this case.

5.3 Export dictionary form

The dictionary file published by the EBA may be exported, either in full or just the part used for defining a reporting framework.

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[5] Note that one dimension may, in principle, take any member of the domain to which it is associated.