

Using GABRIEL Excel to XML Templates

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What are the templates for?

Regulatory data which has to be submitted to the FSA through the GABRIEL reporting system can be uploaded into GABRIEL to save having to key the data into GABRIEL's online or offline forms. In order to upload the data it must be in the appropriate XML¹ format. The general format for the XML is specified in the [Technical Pack](http://www.fsa.gov.uk/pages/Doing/Regulated/Returns/IRR/mer/tech_pack/index.shtml)², and the specific format for each data item is specified in the [Data Reference Guide](http://www.fsa.gov.uk/Pages/Doing/Regulated/Returns/IRR/mer/drg/index.shtml)³.

It is anticipated that most firms who wish to upload data in XML format will have built or bought software applications to prepare the data. However, for firms that do not have such software, the FSA has provided Excel templates to help produce XML data. Currently, these templates are only provided for FSA047, FSA048 and FSA052, whose size and frequency of submission might make them particularly time consuming for online data entry.

¹ eXtensible Markup Language

² http://www.fsa.gov.uk/pages/Doing/Regulated/Returns/IRR/mer/tech_pack/index.shtml

³ <http://www.fsa.gov.uk/Pages/Doing/Regulated/Returns/IRR/mer/drg/index.shtml>

What do I need to use them?

The templates provided make use of Excel's built in XML functionality, but in order to use this, you must have the Professional Edition of Microsoft Excel 2003 or higher. The Professional Edition of Excel 2003 includes an "XML" menu item on the "Data" menu which is required. The Professional Edition of Excel 2007 and above has a "Developer" ribbon which contains the "XML" menu.

How do I create XML data and load it into GABRIEL?

To use the templates, enter the data into the Excel input fields (coloured pale yellow) and when your data is complete, select the Excel menu "Data-->XML-->Export" to create an XML file of your data. If you are using Excel 2007 or later then this menu is available from the "Developer" ribbon rather than the "Data" ribbon. Once you have created your XML file, login to GABRIEL and upload the file using the GABRIEL menu "XML Submission-->Upload XML". There is text within the worksheets and help fields (containing Excel comments) that provide more guidance on completing the input fields.

How can I enter data into the templates?

You can type the data in, or copy and paste it from elsewhere, or enter Excel formulas that point to data from other Excel worksheets or use software such as VBA to populate the data from elsewhere. Note, however, that the format of the fields in the templates must not be changed, otherwise the data might not export to XML correctly. For this reason we'd recommend using the "paste special – values" option in Excel rather than simply pasting. For instance in FSA052 the "spread" figures are defined as text so that they always export as they appear in Excel, and this must be as numbers with 2 decimal places. If you copy and paste in figures from other Excel worksheets that are defined as numbers with 2 decimal places, then the template format will be changed to numbers with 2 decimal places and numbers such as 1.50 will actually export to XML with only 1 decimal place (ie 1.5) which will be invalid. This is a limitation of the way Excel handles XML.

Can I leave fields blank?

In FSA047 and FSA048 yes - if you have no data to report in a particular field on FSA047 or FSA048, leave it blank. However, in FSA052 where all figures have been pre-populated with 0 (volumes) or 0.00 (spreads), these figures must not be blanked out because they are necessary for the XML to be valid. So if you have no data to report in particular fields on FSA052, leave the fields with 0 and 0.00 in.

What are the different worksheets in the templates for?

The template workbooks contain several worksheets for different types of data.

The “Header” worksheet contains the reporting period and reporting basis information and, depending on the data item, may contain details of the reporting currency and/or the currency of the underlying flows and balances. It also contains the version or copy number of the data item submission – normally this will be 1 unless a resubmission has been requested. All fields on this worksheet are mandatory (unless the data item is FSA047/48 and it is for all currencies combined in which case no material currency should be entered).

The “Financial” worksheet contains the main financial figures for the data item.

The “Group” worksheet is only needed for data items which are being submitted on a group basis. Enter the FRN numbers of all the regulated firms in the group covered by the data.

The “FixedData” worksheet contains data that is needed by the XML but which requires no user entry. It also contains configuration information.

Are the fields validated?

There is no validation done within Excel, but when you export your data to XML, you will see a warning message if the resultant XML is not “schema valid”. That means it does not conform to the correct XML format. The message may give you more details, for instance if you have exported FSA052 data “spread” fields with the wrong number of decimal places, or if you have exported FSA052 data with blank “spread” or “volume” figures.

When you upload the data into GABRIEL, the data will be validated to check that it conforms to the correct XML format and also that the “header” information matches an entry on the schedule. Once uploaded into GABRIEL, you will need to validate the data online in the normal way using GABRIEL before you can submit it.

Why are there two Versions and what Protection is there?

In both versions of each template the workbook is protected and the individual worksheets are also protected (except for the pale yellow fields which need to be input). However, in one of the version the protection has no password on it so you can choose to unprotect the individual worksheets and the workbook. The other version has a password preventing the worksheets and workbook from being unprotected.

If you want to make your own modifications to the templates then you should use the versions that are not password protected. There is, however, a risk that modifications you make might invalidate the XML that is generated, preventing it from uploading

into GABRIEL. Because the FSA has no control over such modifications, the contact centre staff who provide support to firms using GABRIEL will not be able to provide support for the templates that are not password protected.

If the data items change in the future (for example if there are new rows or columns), then we will publish new versions of the templates. If you have been using a modified version of the template, then you would need to either update your own version with the equivalent changes or redo your modifications to the new templates.

What is the XML Source for the Templates?

The templates use an “XML map” as their “XML source”. This map is a schema that has been created based on the XML Upload schema from the Technical Pack and incorporates local copies of the individual data item schema, CommonTypes schema and any required shared definition schemas from the Data Reference Guide. The following text shows the FSA052 XML map used by the Excel templates. If you are going to modify the templates that are not password protected then you may want to consider maintaining your own XML map and local copies of the schemas.

FSA052 XML Map:

```
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:dmi="http://www.fsa.gov.uk/mer/datamanagement/internal/domain"
  xmlns:dins="urn:fsa-gov-uk:MER:FSA052:1"
  targetNamespace="http://www.fsa.gov.uk/mer/datamanagement/internal/domain" elementFormDefault="qualified">

  <xs:import namespace="urn:fsa-gov-uk:MER:FSA052:1" schemaLocation="FSA052-Schema.xsd"/>

  <xs:element name="XMLUploadRequest" type="dmi:XMLUploadRequest"/>
  <xs:complexType name="XMLUploadRequest">
    <xs:sequence>
      <xs:element name="dataItem" type="dmi:DataItem"/>
      <xs:element name="reportingPeriod" type="dmi:ReportingPeriodDetails"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ReportingPeriodDetails">
    <xs:sequence>
      <xs:element name="startDate" type="xs:date"/>
      <xs:element name="endDate" type="xs:date"/>
      <xs:element name="submissionDueDate" type="xs:date"/>
    </xs:sequence>
  </xs:complexType>

  <xs:complexType name="DataItem">
    <xs:sequence>
      <xs:element name="copyNumber" type="xs:unsignedLong" />
      <xs:element name="dataItemBody" minOccurs="0" maxOccurs="1">
        <xs:complexType>
          <xs:sequence>
            <xs:element ref="dins:FSA052-Pricing" minOccurs="0" maxOccurs="1"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```

Can we Define Names for the fields?

If you intend to develop software to map data from elsewhere into these templates, then you may want to define names for the fields, rather than map them using absolute cell references. However, we will try to keep absolute cell references constant if we make any future changes to the templates. To define names you will need to use the templates that have no password protection on them. If you want to use macros to define names to make future maintenance easier, then the following text gives an example of a macro that clears all the defined names in a workbook and then sets up some new ones.

VBA Example Macro to Define some Names:

```
Sub SetUpNames()  
    Workbooks("FSA052-Template.xls").Activate  
  
    Dim DefinedName As Name  
    For Each DefinedName In Names  
        DefinedName.Delete  
    Next DefinedName  
  
    Sheets("FSA052-Header").Activate  
  
    ActiveSheet.[B8].Name = "startDate"  
    ActiveSheet.[B10].Name = "endDate"  
    ActiveSheet.[B12].Name = "submissionDueDate"  
    ActiveSheet.[B14].Name = "reportingBasis"  
    ActiveSheet.[B24].Name = "copyNumber"  
  
    Sheets("FSA052-Financial").Activate  
  
    ActiveSheet.[D11].Name = "GBPCash1To3MSpread"  
    ActiveSheet.[E11].Name = "GBPCash1To3MVolume"  
End Sub
```