


Ref	Requirement		
	HEADER		
	ICAEW Technical Accreditation Scheme "Effective Interest Rate Calculation" Software Evaluation		
	Whistlebrook WBEIR		
			
	Date completed: July 2021		
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7	Effective Interest Rate calculation functionality		

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1.	<u>INTRODUCTION AND PROLOGUE</u>		
Introduction			
1.01	The suitability of software for each particular user will always be dependent upon that user's individual requirements. These requirements should therefore always be fully considered before software is acquired. The quality of the software developers or suppliers should also be considered at the onset.		
1.02	Fundamentally, good software should: <ol style="list-style-type: none"> 1. Be capable of supporting the functions for which it was designed. 2. Provide facilities to ensure the completeness, accuracy, confidentiality and continued integrity of these functions. 3. Be effectively supported and maintained. It is also desirable that good software should: <ol style="list-style-type: none"> 5. Be easy to learn, understand and operate. 5. Make best practical use of available resources. 6. Accommodate limited changes to reflect specific user requirements. <p>It is essential, when software is implemented, for appropriate support and training to be available.</p>		
Approach to Evaluation			
1.03	The objective is to evaluate a product against a set of criteria developed by the ICAEW to ensure that the software meets the requirements of Good Accounting Software, as laid down in the summary.		
1.04	In order to effectively evaluate the software, a product specialist from the vendor completed the detailed questionnaire and provided it to the ICAEW to examine. The ICAEW's Scheme Technical Manager then reviewed the operation of the various aspects of the software assisted by a member of the vendor's technical staff and checked the answers to confirm their validity. The questions were individually reviewed and commented on and the majority of assessments were confirmed.		
1.05	The Technical Manager discussed the assessment with a member of the vendor's staff in order to clarify any points requiring further information. In the event of disagreement between the supplier and the Technical Manager, the Technical Manager's decision was taken as final and the response changed accordingly.		
1.06	The latest version of the software was used throughout the evaluation.		
1.07	When the evaluation had been completed, a draft copy was sent to the ICAEW Scheme Manager for review before completion of the final report.		
Prologue: Matters to consider before purchase			
1.08	General Overview:	Whistlebrook develops all of their own software, in the UK, with major input from their clients. As a result Whistlebrook's applications are specifically built for financial institutions with tailored functionality that benefits their client's efficiency. Whistlebrook regularly enhance their software and introduce new applications following client suggestions, their own on-going analysis, and regulatory changes.	
1.09	Supplier background:	Whistlebrook has specialised in providing innovative software solutions for the financial services sector since 1997. In that time they have built a very successful portfolio of software applications that can each be installed on their own, or as an integrated suite to deliver extra benefits by holding all key data in one place thus providing a "single source of truth".	

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1.10	Product background and suitability for the user:	<p>Whistlebrook's Effective Interest software (WBEIR®) is installed on a centralised server, configured to connect to a SQL Server database.</p> <p>Typically users would have a shortcut on their local PC pointing to the executable. Access can be restricted via Active Directory groups. OLAP Cubes are provided for reporting purposes, which require SQL Server Analysis Services.</p> <p>As a Microsoft Partner, all of Whistlebrook's products are compatible with all current supported versions of MS SQL Server.</p>	
1.11	Add-on modules:	<p>Whistlebrook provides a wide ranging suite of back office applications targeted at financial institutions. The other applications cover: Regulatory Reporting (WIRES®); Financial Planning (WFP®); Hedge Accounting (WHA®); Asset and Liability Management (WALM®); Funds Transfer Pricing (WFTP); Treasury Management (WTMS®); Financial Ledgers (WBF®). All applications can be installed independently and used in isolation; however the applications all utilise a centralised data warehouse, providing a 'single source of truth'.</p>	
1.12	Typical implementation [size]:	<p>The product is targeted at mid-sized financial institutions, challenger banks and building societies. However it is scalable to cater for smaller organisations or to handle the demands of larger organisations.</p>	
1.13	Vertical applications:	<p>The product has been designed for the financial services market, primarily banks and building societies.</p>	
1.14	Server platform and database:	<p>The application allows for implementation on-premise or in the cloud.</p> <p>Database: The application utilises the Microsoft SQL Server database platform. This includes an relational database, accompanied by a number of Analysis Services business intelligence databases (cubes) to provide analytical reporting and ad hoc data analysis.</p> <p>Server Software: The application is developed on the Microsoft development stack, using the .Net Framework. The server software is provided through a WCF web service, typically deployed to Microsoft Windows web hosting platform running within Microsoft Windows or Windows Server operating system.</p>	
1.15	Client specification required:	<p>The end user experience is provided through a "thin client" Windows Desktop application, utilising the .Net Framework. It is recommended that client devices are running .Net 4.5.1, on Windows 10 operating system, with at least 4GB RAM.</p>	
1.16	Partner network:	<p>Whistlebrook EIR (and the other applications within the product suite) integrates with many of the core banking platforms available in the UK. As such Whistlebrook has formed a strong working relationship with the providers of these systems to ensure mutual clients can readily utilise the full breath of Whistlebrook applications.</p>	

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2.	<u>ISSUES AND CONCLUSION</u>		
Highlighted issues			
2.01	There are a number of limitations in the product, which while not adversely impacting upon this evaluation may be of importance to some organisations. It is important that any business contemplating the purchase of software reviews the functionality described and limitations therein against its detailed requirements. Attention is drawn in particular to the following areas where the product, on its own, may not be suitable for businesses with certain requirements:		
2.02	The following weakness/omissions were identified:		
	* 2FA is not currently supported.		3.09
	* The system does not have an audit trail which records all changes to transactions as the product is not a transaction system and performs calculations on data imported from the source systems. There is full audit trail of imported data. changes to configurations within the system are recorded in the underlying database but no through a user accessible report.		3.20-3.24 7.20, 7.55
	* With regards to usability: The system does not support multiple languages, the ability to save user-preferences/searches/favourites, creation of user-defined fields, or the ability to amend the layouts of forms.		5.01 5.09 5.10 5.11 5.14
	* WBEIR is not suitable for use on a mobile or small tablet due the the restrictions of screen size.		5.47, 7.14
	* There is no inbuilt workflow functionality, but this is not required for the operation of the system. There is a logical flow to operations.		7.19
	* No integrations with third-party finance systems or on-line services; although this is not currently needed.		7.21, 7.22
	* No ability to define delegated access, or set multi-level authorisations; although these functions are not currently needed..		7.27, 7.29
Evaluation conclusion			
2.03	For the specific use-cases in support of the calculation of EIR values for the operation of loan products, for which the product is designed, it is a solid and capable solution. It continues to be actively developed and enhanced. Members should be aware of the limitation of the solution as above, and fully understand the role that it can play.		
Disclaimers			
2.04	Any organisation considering the purchase of this software should consider their requirements in the light of proposals from the software supplier or its dealers and potential suppliers of other similarly specified products. Whilst the contents of this document are presented in good faith, neither ICAEW, nor the ICAEW's Technical Manager (RSM UK Consulting LLP or any party nominated by the ICAEW to perform this role on the ICAEW's behalf) will accept liability for actions taken as a result of comments made herein. The decision to purchase software resides entirely with the organisation.		

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3.	<u>ACCESS AND SECURITY</u>		
Access control			
3.01	What security features are included to control access to the application?	Single sign on user access by authenticated Windows Users. Windows Users must be granted access to the application by the system administrator.	Confirmed. Granular access using AD groups.
3.02	Can access to functions be managed via a permissions matrix so users can only see (in menus and other links) and access those areas they are authorised to access?	Yes	Confirmed
3.03	Is this access to the application managed by:- - Individual user profiles? - User groups or job roles?	By user groups and profiles	Confirmed
3.04	Can a report be produced detailing all current users, their user groups if relevant, and their authority levels and/or access rights?	No	Noted
3.05	If menus can be tailored does the system limit the display of menu options to those for which permission has been granted for each user?	N/A	-
3.06	Does security allow for access to be limited to: - Read only? - Read/write? - Read/amend/delete?	No	Confirmed
3.07	If data can be accessed by separate reporting facilities, such as ODBC or an external report writer, is the user access security control applied?	OLAP cubes are provided outside of the application and users can have restrictions applied	Noted
3.08	Does the system security integrate with Microsoft's Active Directory or other tools that provide a single sign-on?	Yes	Confirmed
3.09	Does the system provide 2-factor authentication (2FA)?	No	Noted
Passwords and access logs			
3.10	Is access to the software controlled by password?	Yes by way of Microsoft Single Sign on	Confirmed
3.11	Does each user have a separate log on (user id)?	Yes	Confirmed
3.12	If there is no password facility please state how confidentiality and accessibility control is maintained within the software?	N/A	-
3.13	Are passwords masked for any user logging in?	Yes in Microsoft Single Sign on	Confirmed
3.14	Is password complexity available and enforced?	Yes	Confirmed - at the Microsoft level
3.15	Are passwords encrypted?	Yes	Noted
3.16	Are users automatically logged off after a pre-set time not using the system? - Can the time period be changed? - Can any information be viewed without being logged in, including after logging off, if so what information?	No	Noted
Deletion of transactions			
3.17	Is it possible to delete a transaction?	N/A system not managing transactions	Confirmed. Not a transactional system.
3.18	If so, then how are deletions controlled by the system?	N/A	-
3.19	Are deleted transactions retained in the audit trail (see below) and denoted as such?	No	Noted
Audit trails			
3.20	Does the system have an audit trail (log) which records all changes to transactions in the system?	N/A system not managing transactions	Confirmed. Not a transactional system. Changes to the data will be recorded in the underlying database but are not directly accessible to the user. There is a full audit trail of imported data.
3.21	Does this log also record any system error messages and/or any security violations?	N/A	-
3.22	Is it possible to turn off or delete the audit trail?	N/A	-
3.23	Does the software allocate a system generated sequential unique reference number to each transaction in the audit log, date and time stamp it and record the user id?	N/A	-
3.24	Are all master file changes recorded in the audit trail?	N/A	-
Compliance			

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3.25	Does the system operate in a way that is compliant with data protection legislation including GDPR? How does the system facilitate this?	N/A	Noted. By default personal data is not recorded within the system. However, Whistlebrook cited an example where a customer import loan agreements where the borrowers' name was part of the agreement name.
3.26	Describe your use of sub-processors if any?	N/A	-
Backup and recovery			
3.27	Is there a clear indication in the software or manuals as to how the data is backed-up and recovered?	N/A as managed by organisations policies	Noted. Up to the customer.
3.28	How often are backups taken and to what point can restores be done?	N/A as managed by organisations policies	Noted. Up to the customer.
3.29	How does the software facilitate recovery procedures in the event of software failure? (E.g. roll back to the last completed transaction).	N/A as managed by organisations policies	-
3.30	If software failure occurs part way through a batch or transaction, will the operator have to re-input the batch or only the transaction being input at the time of the failure?	N/A no batches	-
3.31	What features are available within the software to help track down processing problems?	Log on screen when assessments are processed	Confirmed. There is a processing log that shows on-screen each part of the process (and account number) and the status at completion.

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4.	<u>DATA PROCESSING AND REPORTING</u>		
Input and validation of transactions			
4.01	Is data input controlled by self-explanatory menu options?	Yes	Confirmed
4.02	Are these menus user/role-specific?	No	Confirmed
4.03	Can the creation or amendment of standing data (e.g. customer account details) be undertaken using menu options or dialogue boxes as opposed to requiring system configuration?	Yes	Confirmed
4.04	Does the software provide input validation checks such as: - [account] code validation? - reasonableness limits? - validity checks?	Yes	Confirmed
4.05	What control features are within the software to ensure completeness and accuracy of data input?	Screens have field data validation and if data input is incomplete the monthly assessment will fail with error messages	Confirmed
4.06	How does the software ensure uniqueness of the input transactions? (i.e. to avoid duplicate transactions)	Dependent on source system data imported	Noted
4.07	Is data input by users validated by scripts or routines in the browser, or other client software, before transmission to the server?	Yes	Noted
4.08	Is data input by users validated by routines running on the server before data files are updated?	Data imported and validated from source systems	Confirmed. An import console carries out some validations.
4.09	Does the above validation ensure that data entered in all input boxes: - Cannot be longer than a maximum length? - Cannot contain unaccepted characters such as semi-colons etc?	Yes	Confirmed
4.10	Are responses to erroneous data input clear so that they do not lead to inappropriate actions?	Yes	Confirmed. There is a focus on the use of drop down menus. There are detailed tool-tips to provide help too.
4.11	Does the software have an automatic facility to correct/reverse/delete transactions?	No	Confirmed
4.12	If yes, are these logged in the audit trail?	No	Confirmed
4.13	Are all data entries or file insertions and updates controlled to ensure that should part of a data entry fail the whole transaction fails?	Yes during data import, will cease and roll back data import	Noted
4.14	Are messages provided to users clearly explaining whether the data entry or file upload has been processed successfully or not?	Yes	Confirmed
Import and export of data			
4.15	Can files/attachments be uploaded and stored against any transaction?	N/A no transactions	Confirmed. Not a transactional system.
4.16	Is there an additional charge made for storage of uploaded files? - If yes, please indicate the cost.	N/A	-
4.17	Can data be imported into the system from multiple types of files, e.g. XLS, text, CSV?	Only from CSV	Confirmed. Comes into the Import Console by way of CSV.
4.18	Explain how the system validates imports into the system and what happens to any import which fails?	Validated in reference to static data, if fails rolled back and error messages provided	Noted
4.19	Are imported /interfaced transactions detailed in the audit trail? [See also 3.27]	Yes in import log	Noted. Full audit trail of all imports visible via the Import Console.
4.20	Can data be exported from all areas of the system to multiple formats e.g. XLS, CSV, PDF, text; if so specify which formats are supported?	No export only OLAP cubes	Noted. The entire assessment statement can be copied to Excel.
Data processing			
4.21	Does the software ensure that menu options or programs are executed in the correct sequence (e.g. outstanding transactions are processed before month end is run)?	Yes	Confirmed
4.22	Does the software provide automatic recalculation, where appropriate, of data input? (e.g. VAT)	N/A	-
4.23	Is a month/period-end routine required to be undertaken?	Yes	Confirmed
4.24	Is it possible to delete accounts if the balance is Nil but transactions have been recorded against the code?	N/A	-

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4.25	What is the size and format of reference numbers and descriptions within:- - Ledgers? - Stock? - Currencies?	N/A	-
4.26	How does the software guard against/warn about duplicate account numbers on set up?	Account numbers come from source system	Noted
4.27	How does the software enable the traceability [from, to and through the accounting records] of any source document or interfaced transaction?	N/A	Noted. Full audit trail of all imports visible via the Import Console.
4.28	What drill down/around functionality is available within the software?	Account level data	Confirmed. Three level heirarchy is supported; see 7.08
4.29	If the software uses a lot of standing information which changes frequently or regularly, does the software allow for such changes to be effected through the use of parameters or tables?	Standing Data does not change frequently	Noted
Report writer			
4.30	Does the system have an in-built report generator or is a third-party solution used (if so please specify)?	Provide OLAP cubes with freedom to choose reporting tool of choice	Confirmed. Can connect directly to the OLAP cube from the report writer (or can use Excel PivotTables).
4.31	Is the report writer based on a standard SQL-type approach and is it flexible and easy to use?	Provide OLAP cubes with freedom to choose reporting tool of choice	As above
4.32	Can the report generator operate over the financial and operational aspects of the system, e.g. combining service metrics with financial information?	Provide OLAP cubes with freedom to choose reporting tool of choice	N/A
4.33	Is a comprehensive data dictionary provided to aid field selection?	Provide OLAP cubes with freedom to choose reporting tool of choice	Confirmed; all in the cubes and associated documentation.
4.34	Does the system provide a library of reports and templates which can be amended, saved and re-run?	Provide OLAP cubes with freedom to choose reporting tool of choice	Confirmed. Standard cubes provided.
4.35	Can users create their own reports? If so, what are the controls on users doing this?	Provide OLAP cubes with freedom to choose reporting tool of choice	Confirmed
4.36	Can users create saved searches /filters / queries?	Provide OLAP cubes with freedom to choose reporting tool of choice	Confirmed
4.37	Can regular reports be added to user menus in the appropriate area of the system?	Provide OLAP cubes with freedom to choose reporting tool of choice	Adding reports to menus is not supported.
4.38	Does the system support the production of on demand (interactive) and scheduled batch reports?	Provide OLAP cubes with freedom to choose reporting tool of choice	Noted. There is a cube-scheduler to set when these are generated.

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5.	USABILITY		
Ease of use			
5.01	Does the solution provide a multi-language user interface?	No	Noted
5.02	Does the system allow for customizable branding and UI (e.g. corporate colour palate, upload company logo, etc)?	Customisable colours but not corporate logo or branding	Noted
5.03	Does the system have a similar look and feel and overall and consistency between screens and modules?	Yes	Confirmed
5.04	Is data entry easily repeated if similar to previous entry?	Yes	Confirmed
5.05	Does the software prevent access to a record while it is being updated?	Yes	Noted
5.06	Is there locking at file or record level?	Normal SQL locking rules.	Noted
5.07	Does the software allow for the running of reports whilst records are being updated?	Yes. Reports are run on the cubes.	Confirmed
5.08	Can timestamps or user comments be added to transactions?	No. There are timestamps in the assessments and within the import processing.	Confirmed. Not a transactional system.
5.09	Is there the ability to store preferences and default values on a per-user basis. e.g. department/team/user?	No	Confirmed
5.10	Does the system have the ability to provide user-defined fields with associated validation of data input?	No	Confirmed
5.11	Can the system provide user with reminders and notifications e.g. workflows?	No	Confirmed. Not a workflow based system.
5.12	If the system provides workflows, does it have functionality to substitute/delegate authorisations?	N/A	-
5.13	Is there the ability for users to define and configure layouts of letters and forms?	Yes by means of an OLAP cube	Noted. Not really generating these.
5.14	Can users save the parameters of searches?	No	Noted
5.15	Does the system have a "universal search" option, allowing a search to be undertaken over all modules of the system?	N/A	Confirmed
5.16	Can the system store menu option 'favourites' on a per user basis?	No	Confirmed
5.17	Can a user open multiple windows accessing the same or different modules of the system?	Yes	Confirmed
5.18	Can more than one software function be performed concurrently?	Yes	Confirmed
User documentation and training			
5.19	Is the manual provided as: - hard copy - on CD - by download - via a web-interface?	By download from secure customer portal	Confirmed. The manual is very detailed.
5.20	Does the manual include: - An index or search facility? - A guide to basic functions of the software? - Pictures of screens and layouts? - Examples? - A tutorial section? - Details of any error messages and their meanings?	Yes fully comprehensive covering all aspects with screenshots & examples	Confirmed. The manual is very detailed.
5.21	Is context-sensitive help available within the system?	Yes	Confirmed; this is everywhere and is comprehensive.
5.22	Is the manual and/or help editable by the user (subject to the permissions matrix)?	It can be provided in a word format.	Noted
5.23	Will the Software House make the detailed program documentation (e.g. file definitions for third party links) available to the user, either directly or by deposit with a third party (ESCROW)?	Yes	Confirmed
5.24	Please detail the training options available?	Training is provided in person or via Teams both to end-users and technical IT staff	Noted
5.25	Who provides training: - Software House? - VAR?	Software house	Noted
Support and maintenance			
5.26	How is the software sold: - Direct from the software house? - Via a Value Added Reseller (VAR) or Integrator?	Direct	Noted
5.27	How is the product supported: - Direct from the software house? - Via a Value Added Reseller (VAR) or Integrator?	Direct	Noted
5.28	Do VARs have to go through an accreditation process?	No VARs	Noted

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5.29	Is the software sold based upon number of named users or a number of concurrent users?	Net asset size of loan book	Noted
5.30	The supplier should detail the support cover options available, covering: - The hours provided? - Associated costs? - The global regions covered?	9.00 to 5:30 Monday to Friday excluding UK Bank Holidays. The software is only provided and supported within the United Kingdom. The cost is 20% of the term licence fee charged annually in advance.	Noted
5.31	Detail the process by which customers raise support requests and how these can be viewed/managed?	There is a SLA for software faults. These can be raised by telephone or email and are logged within the fault logging system.	Noted
5.32	Please note the methods of support available: - Telephone? - Internet chat? - Remote access to customer workstation? - Other, please specify?	Telephone, email, conversations by way of Teams and as required remote desktop access.	Noted
5.33	Do you offer service credits for failure to meet performance around SLA and uptime (if applicable)	N/A	-
5.34	What is your escalation path for tickets which have not been resolved within a reasonable time?	Tickets are subject to regular internal review and escalation	Noted
5.35	How often are general software enhancements provided?	Typically twice per annum but no more frequently than quarterly	Noted
5.36	Will they be given free of charge?	Yes	Noted, provided support is taken.
5.37	How are enhancements and bug fixes provided to customers?	Available by way of download from the customer secure portal	Noted
5.38	Is "hot line" support to assist with immediate problem solving available?	Yes	Noted
5.39	If so, is there an additional cost involved?	No	Noted
5.40	At what times will this support be available?	9.00 to 5:30	Noted
Integration and www facilities			
5.41	Can the software be linked to other packages e.g. word processing, graphics, financial modelling, to provide alternative display and reporting facilities?	Yes three OLAP cubes are provided that can be queried by tools such as Excel and Power BI.	Confirmed
5.42	Can definable links to spreadsheets be created?	Via the cubes	Confirmed
5.43	Does the system provide secure document storage capability: If so, please give examples of the document types saved and what transactions these might relate to.	N/A	-
5.44	Can documents be scanned into a secure repository?	N/A	-
5.45	Does the system provide data migration tools for transactional and master data sets (e.g. employees customers, suppliers, journals, invoices).	Only inbound data import	Confirmed
5.46	What connection mechanisms does the software have and what breadth of functionality in terms of: - operations (add, update, delete)? and - what transactions/data it can access? E.g. if webservices APIs available, then can customers connect to whatever software they wish?	Data is imported to the product by way of the Whistlebrook import console which can receive data in a multiplicity of formats but in the defined data schema layout	Confirmed
5.47	Does the system support mobile working?	Desktop application	Confirmed. No practical mobile support.

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6.	SAAS/HOSTED OPERATION		
	This evaluation covers the system but not the method by which it is delivered and/or contracted for. Potential users need to satisfy themselves on the security and disaster recovery aspects and licensing of the online system and any data protection issues of their own and customer/supplier information, contained therein, being held on the system, as well as the return of the data when the contract expires or is terminated.		
Data centres and customer data			
6.01	Whose data centres are used and where are these located: - If hosted -- where data centre controlled by a third-party? - If SaaS -- where the software vendor will be in control?	Whistlebrook will introduce a number of third party hosting providers but does not currently provide Cloud hosting of this system directly.	Noted
6.02	Does the customer get a choice of the jurisdiction in which their data resides?	N/A	
6.03	What certification(s) do you or your platform operators hold relating to your data centres and your business operations?	N/A	
6.04	Do you or your platform operator have an SSAE16 (System and Organization Controls) report available?	N/A	
6.05	What are the physical controls over the:- - Premises? - Fileservers? - Communications equipment?	N/A	
6.06	Is the space in this/these data centre(s) shared with any other companies?	N/A	
6.07	Is data for different customers/companies kept:- - On separate servers? - In different databases? - In separate database tables? - In a database with data for other customers and companies using logical security to partition customers' data?	N/A	
6.08	How is it ensured that data for different customers and companies is reliably identifiable and only accessed by authorised users for each customer/company?	N/A	
6.09	What controls are in place to prevent users from one customer/company accessing data from another customer/company by accident or by design?	N/A	
6.10	How is [Internet] communication traffic monitored to identify potential problems before they happen: - From a performance perspective? - From a security standpoint?	N/A	
6.11	What procedures are in place to prevent a break in Internet Connection (at the server, client or in between) from causing data corruption?	N/A	
6.12	Are communications between the user's computer and the software service encrypted: - User log in data only? - All data exchanged between user client and software service?	N/A	
6.13	Is data on your servers encrypted at rest?	N/A	
6.14	Is a test environment provided to test configuration changes? If so, is there an additional charge for this?	N/A	
Access to customer data			
6.15	What are the implications of the Data Protection Act over information held by the hosting service provider, and how does the vendor mitigate these?	N/A	
6.16	Are you subject to any legal or regulatory requirements obliging you to retain a copy of customer data?	N/A	
6.17	Who will be able to access or see customer data?	N/A	
6.18	Explain the procedures to prevent unauthorised access from staff, or contractors, working for the service provider or any other people with access to the service provider's internal systems.	N/A	
6.19	Explain the release management procedures in place and the associated segregation of duties ?	N/A	

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6.20	Is there sufficient segregation of duties preventing system developers from accessing and changing live applications and data files?	N/A	
6.21	Explain the review and approval procedures covering system operations staff when emergency changes need to be made to live applications and data?	N/A	
6.22	Is an audit trail always maintained of these emergency changes?	N/A	
6.23	What procedures are in place when members of staff leave to ensure that their system access is stopped?	N/A	
Platform and service levels			
6.24	Which databases can be used (Hosted) or are used (SaaS)?	N/A	
6.25	What forms of user authentication are supported e.g. user names, passwords certificates, tokens etc.?	N/A	
6.26	What is the proposed product/service availability percentage?	N/A	
6.27	What percentage availability has been achieved over the past 12 months?	N/A	
6.28	Is a service level agreement ("SLA") offered regarding: - Service availability? - Data recovery?	N/A	
6.29	Is the service available 24x7 or are there downtime periods for maintenance?	N/A	
6.30	Is the customer made aware of maintenance periods in advance?	N/A	
6.31	Does the application software:- - Require any client software to be installed on the user's computer? - Work entirely within Internet Browser software on the user's computer?	N/A	
6.32	Where the product/service relies upon downloading and running an executable program, has that program been secured with a digital certificate to verify the source and integrity of the program?	N/A	
Platform security			
6.33	What security steps are taken to prevent and detect intrusion attempts?	N/A	
6.34	Is firewall hardware and software used to protect the live systems from unauthorised access?	N/A	
6.35	Which monitoring software is used to create alerts when intrusion attempts are suspected?	N/A	
6.36	Are designated staff responsible for receiving and urgently responding to these alerts?	N/A	
6.37	Have clear procedures been established for identifying and responding to security incidents?	N/A	
6.38	Is all security sensitive software, such as operating systems and databases, kept up to date with the latest software patches? Please indicate how regularly updates are applied.	N/A	
6.39	List the procedures and software tools in place to prevent or detect and eliminate interference from malicious code, such as viruses?	N/A	
6.40	Is a system log maintained by the service provider that details - User access? - User activity? - Error messages? - Security violations?	N/A	
6.41	Is this log available to the customer?	N/A	
6.42	Have there been any successful unauthorised access attempts been made during the last year? If Yes:- - What was the effect on the business and users? - What steps are in place to prevent this happening again?	N/A	
6.43	Is penetration testing regularly carried out by (please indicate frequency of tests): - Staff specialising in this field? - External specialists?	N/A	
6.44	If penetration testing by a specialist is not performed regularly, please indicate the main procedures in place to identify weaknesses?	N/A	

Ref	Requirement	Response	Reviewer Comments
6.45	Are security procedures regularly reviewed? Please indicate frequency of reviews.	N/A	
6.46	What security reporting is provided demonstrating compliance against certification(s) and policy(ies)?	N/A	
6.47	Are any security breaches communicated to customers?	N/A	
Backups by the service provider			
6.48	In relation to backups undertaken by the system provider please explain: - How is a customer's data backed up? - How often is this undertaken? - What is backed up? - What's the media used? - Where are backups stored? - How many copies are there? - How long are they retained for? - Who has access to them? - Is the data encrypted?	N/A	
6.49	How frequently is a test-restore of backups undertaken?	N/A	
6.50	Can the provider restore from a backups that it has taken at a customer request?	N/A	
6.51	Does a customer have the ability to undertake their own backups?	Yes	Noted. Customer can backup their own local instance and data using their own backup software.
6.52	If so, can a customer restore data a backup that they have taken?	Yes	As 6.51
Platform recovery			
6.53	What contingency plans are in place to enable a quick recovery from: - Database or application software corruption? - Hardware failure or theft? - Fire, flood and other disasters? - Communication failures?	N/A	
6.54	How often are these plans tested?	N/A	
6.55	How often are these plans reviewed and updated?	N/A	
6.56	What are your: - Recovery Point Object (RPO) standards? - Recovery Time Objective (RTO) minimum standards?	N/A	
6.57	If transaction records are dated and time stamped are the times used local to the user or based on where the server is located?	N/A	
6.58	What protection is in place to enable users to able to access their accounting and other data if the service provider should experience serious difficulties, cease trading or decide to stop providing the service?	N/A	
6.59	If the system is hosted are there arrangements in place for this third party to continue providing a hosting service in the short term to allow time for customers to negotiate their own arrangements? If so, how long does the arrangement allow?	N/A	
6.60	Are there any individual members of the vendor's staff whose leaving or illness would significantly reduce, or even stop, the service provider's ability to provide a full and reliable service to customers?	N/A	
Platform change management			
6.61	Describe your approach to upgrades including what option customers have not to take upgrades (if any)?	Typically customers are not compelled to take an upgrade	Noted
6.62	Are users able to test the application before new versions go into live use?	Yes	Noted
6.63	Are users given notice before application changes are applied to the live system?	N/A	
6.64	Are changes delivered into the live environment "switched off" to enable users to test them before enabling them for their environment?	N/A	
6.65	Describe what testing and QA processes are undertaken before upgrades and other changes are made live/available to customers?	N/A	
6.66	If a hosted system, explain the release management procedures in place and the associated segregation of duties ?	N/A	

Ref	Requirement	Response	Reviewer Comments
6.67	Are users informed when they next login of the application changes that have gone into live use?	N/A	
6.68	Do customer staff have to take any action (e.g. regression testing) when new editions, patches or upgrades are released? If so, please describe what they should ordinarily do.	Yes. Customers should undertake their own UAT.	Noted
Subscription options			
6.69	What is the minimum level of commitment must the customer sign up to, e.g. 36 months?	Minimum 3 year term licence	Noted
6.70	Where online payment is used, what type of security is used to protect sensitive information?	N/A	-
6.71	Where online subscription / payment is used, is an invoice provided to the customer and, if so, in what format?	N/A	-
6.72	When subscriptions need to be renewed, what advance notice is provided and what is the time limit for renewal?	The Whistlebrook business development manager contacts customers 6-months before renewal.	Noted
6.73	Is there a procedure for late renewal and is there a time limit after which subscriptions cannot be renewed?	N/A	-
6.74	How soon after creating or renewing a subscription (if applicable) can the system / service be used?	N/A	-
6.75	What notifications / confirmations are provided to the customer regarding subscriptions and payments?	N/A	-
6.76	To what extent are users able to access their accounting and other data if: - They miss one or two payments? - They cease being customers?	N/A	-
6.77	At the end of the contract term, how long does a customer have to obtain a copy of their data from you?	The application must be deleted at the conclusion of the contract term	Noted
6.78	At the end of the contract term, how is a customer's data destroyed (if appropriate) and will that destruction be certified?	N/A	Noted. The data belongs to the customer.
6.79	What is your processes regarding disposal of end-of-life and failed hardware devices that were used to operate your service?	N/A	-
SaaS/Hosted Reporting			
6.80	Are reports produced from the same software as the financial applications or is separate reporting software used?	The customer may use third party reporting tools of their choice to access the OLAP cubes	Confirmed
6.81	Does any application software (i.e. other than a web browser or PDF reader) need to be installed on the user's computer in order to prepare or view the reports?	Depends on third party application selected	Confirmed
6.82	What browser versions are support: - On desktop/laptop (PC, Mac, Linux)? - On Tablets? - On mobiles?	N/A	Noted. Not browser based.
6.83	Is access to the reporting facilities and data controlled by the same procedures as access to the main application?	Depends on Customers deployment model	Noted
6.84	If it's different, explain the user access control facilities available to ensure information is only viewed by users with appropriate authority?	N/A	Noted; e.g. depends on whether the reporting tool supports SSO.
6.85	In what electronic formats are reports produced:- - PDF? - XML? - MS Excel spreadsheet? - CSV file? - As html for viewing in a web browser? - Other, please specify?	Depends	Noted. Customers can use any BI tool of their choice to link to the OLAP cubes (e.g. Microsoft PowerBI). Reporting facilities will depend on the tool chosen.
6.86	Are report documents stored on the web server or on the user's computer? If stored on the web server, are they secure to ensure only users with appropriate authority can get access?	Depends	See 6.85
6.87	For documents viewable in a browser is any data stored on the user's computer in a web browser cache or temporary file? If Yes: - Is there any protection against other users viewing the report or data on which it is based? - Is it clear on the reports when they were produced and the date of the data on which they are based, so the user can tell whether they are viewing out of date information?	Depends	See 6.85

Ref	Requirement	Response	Reviewer Comments
6.88	Are communications between the browser and the server encrypted for any report related communications?	Depends	See 6.85
6.89	If reports are produced dynamically each time the user views them can historical reports be reproduced at any time?	Depends	See 6.85
6.90	Can reports viewable in a browser be navigated dynamically by users? For example: - Enabling drill down to more detailed information? - Altering which columns and rows of data are displayed. - Choosing time periods? - Specifying selection criteria?	Depends	See 6.85
6.91	Can report data be reliably copied and pasted direct from browser viewable reports to an MS Excel spreadsheet retaining any table layout?	Depends	See 6.85
6.92	If reports are incomplete, for instance due to a poor Internet connection, is sufficient information provided to enable the user to notice that some of the report is missing?	Depends	See 6.85

Ref	Requirement	Response	Reviewer Comments
7.	<u>EFFECTIVE INTEREST RATE CALCULATION FUNCTIONALITY</u>		
Global setup			
<i>Global Parameters:</i>			
7.01	Does the system facilitate the setup and maintenance of the details of the firm using the software and valid users within that firm? If so, can mandatory fields be set?	The system users are determined from Microsoft Active Directory	Confirmed. Actually no customer details are held apart from any loan-book details.
7.02	Does the system make use of global lists, e.g. Postcodes, VAT codes, market codes, fee codes? If so, specify what is provided.	The system relies on data imported from the core banking system	Confirmed
7.03	Does the system contain an inbuilt financial calendar? If so can this be manually overridden?	Yes but cannot be overridden	Confirmed
7.04	Does the system contain a list of historical interest rate changes? If so: - What types of rates are held? - How far back/forwards does the calendar span?	Only if required to create a historic profile for a loan.	Confirmed
7.05	Can interest rate changes be updated automatically from a specialist third-party service?	Interest rates are product specific and configured by the lender in accordance with product requirements.	Confirmed
7.06	If so: - State which service is used? - Can rates subsequently be manually changed by a user, subject to the permissions matrix? - Is there an audit trail of all changes to rates?	N/A	-
<i>Account/product types:</i>			
7.07	Does the system hold a library of types of loan-account products? If so, list the types supported, e.g. Mortgage, loans, asset finance, bridging, etc..	The system supports any loan time, even those that are negative for instance in relation to an offset mortgage. Configuration within the product enables the modelling of any individual loan, or portfolio of loans, behaviour.	Confirmed
7.08	Does the system provide for a product hierarchy? If so, explain what is provided, e.g. Products, product sub-group, product group.	The product hierarchy is Product Group, Product Sub Group and Product.	Confirmed
7.09	If a hierarchy is supported can account/product-based parameters be set at sub-group and group level as well as product level?	Configuration of behavioural aspects can be set at any level of the product hierarchy	Confirmed
7.10	What EIR-related parameters can be set against a product: (product-specific parameters) - Fee, fee-type, calculation types, amortisation flag? - Rate change frequency? - Cap/floor rates? - Date when special-terms end? - Date when the contractual rate changes? - Reversion period and balance reduction percentages? - Repayment types? - Other attributes and interest rate parameters?... Please state what is supported.	In addition to these product specific parameters the appropriate reference interest rate can be set as well as either the expected life characteristics of the loan or its expected average life.	Noted
<i>Working/calculation parameters</i>			
7.11	What additional EIR-related parameters can be set: (non product-specific EIR configuration parameters) - Interest charging policy? - Repayment policy? - Amortisation profile? - Days fees to include before the product started? - Early Redemption Charge processing parameters (IFRS9)? - Capital and interest adjustments? - Other parameters?... Please state what is supported.	As well as these global parameters repayment behaviour in the first month of draw down for interest calculation and account repayment can be configured. As well as whether for repayment loans the amount of monthly repayment is recalculated within a period with a rate change.	Noted
7.12	Does the system allow "overrides" to be set, e.g. Setting a maximum EIR rate?	Overrides to the Global Configuration can be set for interest and repayment behaviour, redemption code processing and the period before draw down whereby any fees charged need to be amortised over the expected loan life.	Noted
7.13	If so, can overrides be set by account/product type?	Overrides are set by account type	Noted
<i>Environment setup:</i>			

Ref	Requirement	Response	Reviewer Comments
7.14	Does the system allow a user to use multiple devices, e.g. a desktop and a tablet?	login can be from multiple devices	Confirmed, however there are screen resolution challenges with the use of a mobile.
7.15	If accessed by a tablet/mobile, does the application auto render to fit the screen type/size?	desktop only application	Confirmed
7.16	Does the system provide the facility for off-line working, i.e. downloading a scenario for amending away from the office and then subsequently uploading any changes back into the system? If so, please explain how this operates.	No	Confirmed
7.17	Can the user leave the editing session and save it to return to the same place to finish off the editing session without having to start all over again?	N/A	-
7.18	Does the system provide a facility for auto-saving changes during a user's editing session? If so: - Can the frequency of these auto-saves be manually set? - Can the user initiate a save manually? - Can a user roll back to a previous saved version?	No	Noted
7.19	Does the system provide inbuilt workflow functionality?	No as this would give no utility benefit	Noted, but there is a logical flow.
7.20	Does the system have an audit trail that includes details of changes to: - Standing data including lists, parameters, libraries of account/product types, product-specific parameters and non product-specific EIR configuration parameters? - Client and scenario details?	No	Noted. Changes to the data will be recorded in the underlying database but are not directly accessible to the user.
7.21	Does the system integrate to accounting/financial packages? If so, please list which ones are supported and explain the method of integration (e.g. dedicated connector, webservices, etc):	No	Noted
7.22	Does the software directly integrate with on-line software/services? If yes, please list the packages/services in the categories below and explain the method of integration (e.g. dedicated connector, webservices, etc): - Accounting software (e.g. Sage, QB, Xero)? - Tax software? - Others, please specify?	No	Noted
7.23	Does the system allow for multiple operating environments, e.g. test, training, live/production?	Yes	Confirmed
7.24	If so, is there an additional charge for this?	No	Noted
User setup			
7.25	Does the system provide a permissions matrix so that rights can be set at user and group level?	Set at Group level	Confirmed
7.26	Does this apply to: - Specific areas of functionality? - Setup of system parameters and standing data? - Authorisations? - Specific clients? - Particular scenarios for those clients?	Specific areas of functionality	Confirmed
7.27	Is it possible to define delegated access?	No	Confirmed
7.28	Can workflow authorisations be set to work at a user and/or group level?	N/A	-
7.29	Can multi-level authorisations be set?	No	-
7.30	Are there any restrictions on more than one user working on the same client scenario at the same time?	No	Noted
Client / scenario (assessment) setup			
7.31	Does the system facilitate the setup and maintenance of a client's details (client profiles)? If so, can mandatory fields be set?	All client details are draw from source data systems and cannot be altered.	Confirmed
7.32	Can the system record client notes, etc as required?	No	Confirmed
7.33	Does the system provide a simple view showing all the scenarios created for a client?	Yes	Confirmed

Ref	Requirement	Response	Reviewer Comments
7.34	Does the system provide a straightforward way to search for a scenario, with search parameters such as: client, scenario-ID, year, date-range?	Yes, these are available in the drop down list	Confirmed
7.35	Is it possible to choose to set up a new scenario for a client by copying forward all/parts of the details from the previous year?	No	Confirmed. Scenarios remain for the lifetime of the loan. A customer can run the assessment on them whenever they want.
7.36	Does the system provide the ability to delete scenarios, subject to the permissions matrix? If so, is this noted in the audit log?	An individual group can be prevented from access to Scenario management screens	Confirmed
7.37	Does the system come with a library of standard scenario templates that can be used to add a new scenario to a client?	This would not be appropriate.	Confirmed. Customers (Banks or Building Societies etc) must make their own decisions as to how their lenders behave.
7.38	Are there specific scenario templates for different types of: - Client sector? - Client size? - Product? - Other, please specify?	N/A	-
7.39	Can a new scenario template be created based on an existing template, then manually amended?	N/A	-
7.40	Can client-specific templates be created?	Every scenario is specific to the particular borrower's behaviours.	Noted
Constructing and amending the EIR			
7.41	Does the system provide options to produce a forward interest profile and from this generate cashflows?	Yes	Confirmed
7.42	Can the main input factors be pulled from the default parameters held within the system and manually overridden as required?	The forward interest profile is derived from the actual loan parameters from the source lending system. These loan parameters cannot be changed.	Confirmed
7.43	Do these include: - Interest rates? - Repayment value? - Key dates? - Reversion parameters? - Dates/rates in relation to the crossover period? - Other... please specify the main factors?	The forward interest profile is derived from imported data such as original loan balance, original term, interest rate and historical interest rate changes. It is only the factors that determine the future expected behaviour, such as reversion behaviour, that are configurable.	Confirmed
7.44	Does the system allow changes to the interest calculation method? If so, please explain the methods provided.	The system allows configuration of a multiplicity of calculation methods daily or periodic, charged on six different basis including monthly or quarterly, 7 different capitalisation basis such as bi-annually or at maturity and whether compounded on a daily basis.	Confirmed
7.45	Does the system automatically produce the forward profile and the associated EIR?	The forward profile is automatically produced for a loan in the month it is first imported into the system and the period end assessment process run.	Confirmed
7.46	Does the system also generate the amortised fee income, costs and other profile outputs?	Yes	Confirmed
7.47	Does the system apply any machine learning to the creating of the interest profile and/or the subsequent profile/EIR? If so, please explain how this operates.	No	Noted
7.48	Can the input variables/parameters and the resulting profiles, cashflows and EIR be exported to Excel, CSV, or printed out?	The full assessment profile can be exported into Excel and from that by way of anything other format.	Confirmed
7.49	Does the system have an audit trail that records all the various parameters/setting as these change on a monthly basis?	No	Confirmed
Other related functionality			

Ref	Requirement	Response	Reviewer Comments
7.50	Does the system support a "switch" where a loan, currently on a special terms product and subject to EIR, "switches" to another product. That product may be another special terms product or it may be non-special terms. If so, please state the types supported.	Products can be switched or ported a multiplicity of times to special terms products or products with an average life	Confirmed
7.51	Does the system support a "transfer" where a loan, currently a non-special terms product, "transfers" to another product. If so, please state the types supported.	Products can be transferred a multiplicity of times to special terms products or products with an average life	Confirmed
7.52	Does the system support the creation and maintenance of "Behavioural curves" (and the associates periods and payment profiles) as used in IFRS9?	The system supports behavioural curves for modelling prepayment behaviours for FRS102 or IFRS 9 and also modelling stage 3 loss provisions for IFRS 9	Confirmed
7.53	If so, can they be assigned to particular products?	Yes	Confirmed
7.54	Does the system provide workflow functionality to step the user through the whole EIR process?	This is not required the system operates as an accounting system. A user progresses month to month importing month end data and outputting journal information period by period.	Confirmed
7.55	If so, is there built in help/FAQs to assist a user if they need guidance or clarity of what an option means?	There is contextual help in all key fields as well as a comprehensive user guide.	Confirmed
7.56	Can a workflow be paused and subsequently resumed at any process?	N/A	-
7.57	Does the system allow actions/tasks to be created on users of the system for follow up actions?	N/A	-
7.58	Is it possible to report on the progress of list of actions?	N/A	-
7.59	Does the system provide an overview of the completion progress/status of actions?	N/A	-
Reporting and reporting packs			
7.60	Does the system provide an inbuilt suite of reports? If so, please detail the main areas covered?	The system provides three OLAP data cubes	Confirmed
7.61	Does the supplier of the system warrant to customers that the outputs of the system conform to IFRS 9 requirements and will continue to do so should any updates or amendments to that standard be issued?	The supplier warrants conformance with FRS102 and IFRS9 income recognition for basic financial instruments.	Noted
7.62	Does the system enable customisation of reports by a combination of various parameters/dimensions?	Yes by way of the OLAP data cubes	Confirmed
7.63	If so, what parameters are supported: - Account/product? - Date range? - Interest-rate related? - Fee related? - Maturity date? - Other, please provide brief details?	An extensive list of all measures and dimensions are provided in the three OLAP cubes to enable virtually limitless reporting configuration.	Confirmed; these are all detailed in the accompanying documentation.
7.64	Do the reports provide totals where applicable?	As required	Confirmed
7.65	Is there functionality to drill through from output data in the report to the source/underlying parameters to help resolve any queries?	The OLAP cubes allow drill down to an account level.	Confirmed
7.66	Is a report writer provided as part of the software or as an add on? If so, please state the name of any third party package.	Microsoft Power BI or Excel are recommended but not provided	Confirmed
7.67	Does the report writer have the facility to scroll up and down when output to screen?	The OLAP cubes support any presentation approach	Noted
7.68	Does the report writer allow print previews of all reports?	Yes by way of the OLAP data cubes	Noted
7.69	Can a hard copy be produced of all screen enquiries?	Only by way of print screen or copy but the detailed assessment analysis of an individual loan can be copied in its entirety to Microsoft Excel.	Confirmed
7.70	Does the system provide an inbuilt analytics module so that detailed/complex multi-variable reporting can be undertaken?	No but three OLAP cubes are provided	Confirmed
7.71	Does the system provide a standard reporting pack for a scenario? If so, please describe the contents of the pack.	No	Noted

Ref	Requirement	Response	Reviewer Comments
7.72	Does the system allow for user-customisable document formatting of the reporting pack? - Font? - Paragraph style? - Page format? - Watermark, e.g. "Draft"? - Company/client logo/graphic? - Signing boxes? - Other, please specify	Yes by way of the OLAP cubes	Confirmed. The customer can produce their own customised reports using a BI tool such as Microsoft PowerBI.
7.73	Can the user preview the document being created in real-time as they respond to the tasks in the workflow?	N/A	-
7.74	Can the pack be produced in different formats? If so, are the following supported: - PDF? - MS Word (DOCX) format? - MS Excel (XLSX)? - Other, please specify?	Yes by way of the OLAP cubes	Confirmed
7.75	Can the system support distribution of the packs via email?	Yes by way of the OLAP cubes. Use of Power BI enables reports to be published to mobile devices on a daily basis.	Noted
7.76	Does the system provide a client portal to enable the exchange of documents between the firm using the system and their clients?	N/A	Noted