

ABERDEEN CITY COUNCIL

COMMITTEE	Audit, Risk and Scrutiny Committee
DATE	2 December 2021
EXEMPT	No
CONFIDENTIAL	No
REPORT TITLE	Internal Audit Report AC2203 – Financial System Interfaces and Reconciliations
REPORT NUMBER	IA/AC2203
DIRECTOR	N/A
REPORT AUTHOR	Colin Harvey
TERMS OF REFERENCE	2.2

1. PURPOSE OF REPORT

- 1.1 The purpose of this report is to present the planned Internal Audit report on Financial System Interfaces and Reconciliations.

2. RECOMMENDATION

- 2.1 It is recommended that the Committee review, discuss and comment on the issues raised within this report and the attached appendix.

3. BACKGROUND / MAIN ISSUES

- 3.1 Internal Audit has completed the attached report which relates to an audit of Financial System Interfaces and Reconciliations.

4. FINANCIAL IMPLICATIONS

- 4.1 There are no direct financial implications arising from the recommendations of this report.

5. LEGAL IMPLICATIONS

- 5.1 There are no direct legal implications arising from the recommendations of this report.

6. MANAGEMENT OF RISK

- 6.1 The Internal Audit process considers risks involved in the areas subject to review. Any risk implications identified through the Internal Audit process are as detailed in the attached appendix.

7. OUTCOMES

- 7.1 There are no direct impacts, as a result of this report, in relation to the Council Delivery Plan, or the Local Outcome Improvement Plan Themes of Prosperous Economy, People or Place.
- 7.2 However, Internal Audit plays a key role in providing assurance over, and helping to improve, the Council's framework of governance, risk management and control. These arrangements, put in place by the Council, help ensure that the Council achieves its strategic objectives in a well-managed and controlled environment.

8. IMPACT ASSESSMENTS

Assessment	Outcome
Impact Assessment	An assessment is not required because the reason for this report is for Committee to review, discuss and comment on the outcome of an internal audit. As a result, there will be no differential impact, as a result of the proposals in this report, on people with protected characteristics.
Privacy Impact Assessment	Not required

9. APPENDICES

- 9.1 Internal Audit report AC2203 – Financial System Interfaces and Reconciliations.

10. REPORT AUTHOR DETAILS

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Internal Audit Report

Finance

Financial System Interfaces and Reconciliations

Issued to:

Steven Whyte, Director of Resources
Jonathan Belford, Chief Officer – Finance
Fraser Bell, Chief Officer – Governance
Richard Burnett, Senior Accountant
External Audit

EXECUTIVE SUMMARY

Background

The Council's Integrated Financial System (IFS) is used to: make payments to suppliers; raise debtors invoices; and for the Council's accounting requirements. The system is capable of reporting the Council's budgeted and actual financial position. The Council's IFS is updated with: purchase orders and receipts, and creditors, debtors and general ledger transactions, by various Council systems.

Objective

The objective of this audit was to obtain assurance that appropriate checks and balances are in place to confirm the accuracy of information transferred into the Integrated Financial System.

Assurance

In general the accuracy of financial information transferred into the Council's IFS is well controlled based on a review of a sample of 51 interface batches. However, updated procedures, improved Digital and Technology (D&T) records of interface adjustments, and a system of review for interface adjustments prepared by D&T and Finance would enhance assurance over this area.

Findings and Recommendations

Written procedures are in place on how to reconcile accounts payable, create accounts receivable and journal interface batches, process interfaces and correct related errors. However, Digital and Technology (D&T) and Finance procedures did not include an explanation of how assurance was gained that all interfaces / financial system updates had been processed as expected. In the absence of a list of interfaces expected and an explanation of how all interface data is verified, there is an increased risk the financial system will not be updated as required, increasing the risk of financial misstatement, or of invoices not being processed. Since the technicalities of interface processing and verification are operated by a small team within Digital and Technology (2.7 FTE) and a small team within Finance (3.6 FTE), procedures are necessary for business continuity. A recommendation graded 'Significant within audited area' was raised with Finance to formalise assurance processes to cover all system interfaces / updates.

D&T confirmed that whilst supporting documentation is retained, manual adjustments are not subject to a system of review prior to interfaces being uploaded to the IFS and a log is not maintained of changes to facilitate such a process, increasing the risk of error or fraud. Whilst Finance document manual adjustments they are not subject to a system of review prior to interfaces being posted to the IFS. Recommendations graded 'Significant within audited area' were raised with Digital and Technology and Finance to introduce a system of review for interface manual adjustments and for D&T to maintain a log of manual adjustments.

Management Response

Finance has agreed to update procedures to cover the frequency of interfaces for verification purposes. In addition, Finance has also agreed to introduce a system of review for all interface changes and to retain documentation provided by D&T in support of interface changes proposed by D&T to Finance for approval.

1. INTRODUCTION

- 1.1 The Council's Integrated Financial System (IFS) is used to: make payments to suppliers; raise debtors invoices; and for the Council's accounting requirements. The system is capable of reporting the Council's budgeted and actual financial position. The Council's integrated financial system is updated with: purchase orders and receipts, and creditors, debtors and general ledger transactions, by various Council systems as described below.
- 1.2 The objective of this audit was to obtain assurance that appropriate checks and balances are in place to confirm the accuracy of information transferred into the financial system.
- 1.3 The factual accuracy of this report and action to be taken with regard to the recommendations made have been agreed with Jonathan Belford, Chief Officer – Finance and Richard Burnett, Senior Accountant.

2. FINDINGS AND RECOMMENDATIONS

2.1 Written Procedures

- 2.1.1 Comprehensive written procedures which are easily accessible by all members of staff can reduce the risk of errors and inconsistency. They are beneficial for the training of current and new employees and provide management with assurance that correct and consistent instructions are available to staff, important in the event of an experienced employee being absent or leaving.
- 2.1.2 Written procedures are stored in SharePoint and are accessible to all Finance Systems Team (FST) staff involved in processing interfaces. The procedures included some guidance on how to reconcile accounts payable, accounts receivable and journal interface files, process interfaces and correct related errors. Procedures were also in place covering Digital and Technology responsibilities in relation to interface processing and adjustments.
- 2.1.3 However, Digital and Technology and Finance procedures did not include an explanation of how assurance was gained that all interfaces / financial system updates had been processed as expected. A list of interfaces and their schedule for processing is not in place for the purposes of ensuring interface files have been transferred to the Integrated Financial System's server as expected. A list of financial system interfaces is detailed at appendix 2.
- 2.1.4 In the absence of a list of interfaces expected and an explanation of how it is ensured all interface data is verified, there is an increased risk the Council's financial system will not be updated as required, increasing the risk of financial misstatement, or of invoices not being processed. Since the technicalities of interface processing and verification are operated by a small team within Digital and Technology (2.7 FTE) and a small team within the Finance (3.6 FTE), procedures are necessary for business continuity.

Recommendation

Finance should formalise assurance processes to cover all system interfaces / updates.

Service Response / Action

Agreed. Procedures will be updated to cover the frequency of interfaces with an explanation of what to do if all interfaces are not received as expected. In addition, procedures will be updated to indicate the required action where the FST is emailed to indicate an interface has been uploaded to the Integrated Financial System but no interface file can be identified. A meeting will be held with FST staff to discuss the revised procedure requirements.

Implementation Date

December 2021

Responsible Officer

Senior Accountant

Grading

Significant within audited area

- 2.1.5 It was noted that both Digital and Technology and Finance take responsibility for manually adjusting failed interfaces in order for files to be successfully processed. However, the nature of these interventions is distinct, with technical issues relating to the upload of interface files being resolved by Digital and Technology and file posting issues relating to the integrated financial management system being addressed by the FST.

2.2 Interface Reconciliations

- 2.2.1 Interface files are saved to the Integrated Financial System's (IFS) server on an automated basis via scheduled evening 'cron jobs'; these files are automatically uploaded to a 'click'

holding area within the system the following morning at 7.15 am – this generates an email to the FST and Systems Analysts of what has been loaded to clink.

- 2.2.2 The system has a number of automated checks which identify failures. The cron jobs all produce logs and if there are any errors then warning emails are sent to D&T staff to identify the problem and take appropriate action. The cron job writes out any error records to a “clink.bad” file which helps to identify which batch has caused the problem.
- 2.2.3 System Analysts in D&T cross reference the feeder system interface file batch values and time stamps leaving the feeder system with the values and batch time stamps in the interface batch loaded to the eFinancials server. D&T then check for any ‘rogue’ interface files before confirming a complete set of files is in place as required (header, invoices / transactions and analysis) – if the expected number of files is not saved as required, then the files are renamed with an ‘incomplete’ pre-fix and removed from further processing by setting their status to invalid.
- 2.2.4 Interfaces will commonly fail where a variance occurs, such as inputting a date out of the expected range for the interface or an incorrect financial code. Duplicate interface uploads based on batch references and invoice numbers are also rejected by the system. Some clink imports may require to be removed from the clink tables, in which case an email agreement with the respective Service is saved to document this process and the related reasons, with subsequent re-creation of the file by the feeder system by the Service as appropriate. Other errors may require a manual adjustment to the file; the before and after screenshots of the interface file should be saved by D&T and the adjustment should be authorised by both the User Contact (Service based officer who processed the interface) as well as the System Owner or FST, according to the D&T procedure.
- 2.2.5 D&T confirmed that whilst supporting documentation is retained, manual adjustments are not subject to a system of review and a log is not maintained of changes to easily facilitate such a process, increasing the risk of error and fraud. A similar issue was identified in relation to manual adjustments to interface files processed by the FST, as described at paragraph 2.2.11 below.

Recommendation

a) A log of manual adjustments made by D&T should be maintained including the nature of adjustments, reason and details of the officer responsible for the adjustment.

b) Manual adjustments to interface files processed by D&T and the FST should be subject to a system of review.

Service Response / Action

a) Agreed. A record will be maintained by Finance of D&T manual adjustments as part of a new system of review of ‘pre-clink’ upload changes made by D&T. Related emails / supporting documentation detailing the nature of adjustments, related reason and responsible officer will be saved.

b) Agreed. Finance will introduce a system of review within the FST whereby amendments to interface files will be reviewed a day in arrears by an officer who was not responsible for posting the files under review. Any pre-clink upload changes made by D&T would be verified by Finance before being posted to the integrated financial management system as described in response to recommendation 2.2.5a.

Implementation Date

December 2021

Responsible Officer

Senior Accountant

Grading

Significant within audited area

- 2.2.6 A BOXI report is scheduled to be emailed to the FST every morning at 8 am detailing what has been loaded to clink, with the respective interface batch names and numbers and values of records. 4 separate BOXI reports are available covering interfaces for: Accounts Receivable cash collected (IF002 report); Accounts Payable transactions (IF003 report); Accounts Receivable invoices (IF004 report); and General Ledger transactions (IF005 report). These are reconciled to the 7.15 am D&T emails referred to in paragraph 2.2.1 above to ensure what has been uploaded to clink is what is appearing in clink. Furthermore, in the case of accounts payable interfaces, System Owners send details of their submitted interface batches (reference numbers, total values and number of transactions) to the FST, and these are also reconciled to the related BOXI clink report.
- 2.2.7 If total values and transaction numbers balance, the interface batches are posted by the FST Processing Team. The FST then generate a report from the Integrated Financial System (IFS) showing details of transactions that were successfully uploaded into the IFS and any remaining rejected transactions / errors in clink requiring investigation.
- 2.2.8 The FST has detailed procedures covering investigation and correction of interface errors / rejections. In general, confirmation is required from the 'department in question' for any amendments to financial coding or transaction values (e.g. net amount plus VAT not equal to gross). However, some basic errors can be rectified by the FST without System Owner input where the problem is clearly understood e.g. rectifying spacing in financial coding.
- 2.2.9 Fleet Management System accounts payable files are an exception to this rule, due to a recurring problem relating to VAT; the FST correct the affected VAT without querying the issue with the Service, since the required correction is understood – this relates to the interface batch VAT being correct (as included on interface 'header') however the VAT requires manual application to the related charges to balance to the header VAT.
- 2.2.10 44 Accounts Payable invoice interfaces, 3 Accounts Receivable payment interfaces, and 4 General Ledger interfaces across a range of systems and dates were reviewed. This included all Interfaces processed on 1 April 2021, 10 May 2021 and 18 June 2021 and a further 4 system interfaces not covered on these days. All interface files had been reconciled as required and interfaces had been uploaded to the Integrated Financial System.
- 2.2.11 Where exceptions occurred (7 accounts payable invoices and 1 journal line in a journal rejected on 1 April 2021, 2 accounts payable invoices rejected on 10 May 2021 and 10 accounts payable invoices and 3 journal lines on 18 June 2021), System Owners had been notified of the rejections as required for investigation and had reported the required correction to the FST, which was applied to the IFS in a timely manner. Rejected transactions were corrected and re-uploaded by the same officer within the FST and there is not a system of review to verify changes made. In the absence of review there is an increased risk of error and fraud. A related recommendation has already been made at paragraph 2.2.5 above.

2.3 Professional Electronic Commerce Online System (PECOS)

- 2.3.1 Bulk uploads of orders placed on PECOS are completed overnight, while ongoing variations or goods receipts are interfaced every 30 minutes. System e-mails are sent to an FST email address notifying them of a successful upload or reporting and detailing any failures. The FST review the failure reports to ascertain the reason, and either notify the requisitioning Service to make a correction (e.g. incorrect financial code to be corrected), or where administrative action is required, make amendments to PECOS or eFinancials (e.g. supplier closed in eFinancials but open in PECOS allowing order). The interface will not accept any non-active financial ledger codes, which will be reported as failures, and therefore no suspense entries will be generated.

- 2.3.2 Orders and receipts interfaced from PECOS to eFinancials are placed in a holding area each day, when a “matching” job is processed. For an invoice to be processed successfully, the system will look for a three way match between the purchase order, goods received and invoice. If invoices relating to purchase orders placed through PECOS are matched, they will be accepted automatically for payment in eFinancials, once the invoice information is entered to the system.
- 2.3.3 The last Purchase Orders Processing (POP) reports for the dates 1 April 2021, 10 May 2021 and 18 June 2021 (interfaces every 30mins) were obtained and reviewed. 10 Purchase Orders (POs) were rejected; these were processed appropriately.
- 2.3.4 The Service advised a record of adjustments to PECOS interface files is not maintained and manual adjustments processed are not subject review. A recommendation has already been made at paragraph 2.2.5 to introduce a system of review for manual adjustments to interface files.

2.4 Accounts Payable and Accounts Receivable Sub-Ledgers

- 2.4.1 At period end the accounts payable and accounts receivable sub-ledgers are closed down and reports are run to confirm that this has taken place successfully; the sub-ledgers were closed timeously in July and August 2021 and system exception reports, which included a check of sub-ledger totals to general ledger control account totals, had been run on the same day the sub-ledgers were closed down and no exceptions were reported. More detailed reconciliation reports of accounts payable and accounts receivable sub-ledgers to their respective general ledger control accounts for July and August 2021 were reviewed. These had been completed in a timely manner and no reconciling differences were noted.

AUDITORS: C Harvey
A Johnston
A McDonald

Appendix 1 – Grading of Recommendations

GRADE	DEFINITION
Major at a Corporate Level	The absence of, or failure to comply with, an appropriate internal control which could result in, for example, a material financial loss, or loss of reputation, to the Council.
Major at a Service Level	<p>The absence of, or failure to comply with, an appropriate internal control which could result in, for example, a material financial loss to the Service/area audited.</p> <p>Financial Regulations have been consistently breached.</p>
Significant within audited area	<p>Addressing this issue will enhance internal controls.</p> <p>An element of control is missing or only partial in nature.</p> <p>The existence of the weakness identified has an impact on a system's adequacy and effectiveness.</p> <p>Financial Regulations have been breached.</p>
Important within audited area	Although the element of internal control is satisfactory, a control weakness was identified, the existence of the weakness, taken independently or with other findings does not impair the overall system of internal control.

Appendix 2 – System Interfaces and Updates

Accounts Payable Module	Accounts Receivable Module	General Ledger	Purchase Order Processing (POP) Module
Payroll System	Cash Receipting System	Payroll System	Purchase Order and Receipting System
Non-Housing Repairs System	Spreadsheet uploads of invoices and credit notes (Xcel uploader)	Cash Receipting System	
Library Management System		Housing Rent System	
Education Maintenance Allowance and Clothing Grant Databases		'K-Batch' Council Tax and Non-Domestic Rates (NDR) journals	
Non-Domestic Rates System (refunds)		Journals by spreadsheet upload (Xcel uploader)	
Accounts Payable Document Management and Payment System			
Social Care Case Management System			
Estates Management System			
Fleet Management System			
Early Payment Discount Provider			