Office of the Chief Financial Officer, Washington, DC

New Core Project – New Core Financial Management Solution

To: Sarah A. Lyberg, Acting Deputy Chief Financial Officer, F
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From: Dorothy L. Bagley, Director, Information Systems Audit Division, GAA

Subject: New Core Project: Although Transaction Processing Had Improved Weaknesses
                    Remained

Attached is the U.S. Department of Housing and Urban Development (HUD), Office of Inspector General's (OIG) final results of our completed audit of the New Core Financial Management Solution.

HUD Handbook 2000.06, REV-4, sets specific timeframes for management decisions on recommended corrective actions. For each recommendation without a management decision, please respond and provide status reports in accordance with the HUD Handbook. Please furnish us copies of any correspondence or directives issued because of the audit.

The Inspector General Act, Title 5 United States Code, section 8M requires that OIG post its publicly available reports on the OIG Web site. Accordingly, this report will be posted at http://www.hudoig.gov.

If you have any questions or comments about this report, please do not hesitate to call me at 202-402-8139 or Jacqueline Hyslop at 313-234-7403.

Attachment

Highlights

What We Audited and Why

We audited the functionality of the U.S. Department of Housing and Urban Development's (HUD) New Core Financial Management Solution as part of the internal control assessments required for the fiscal year 2017 financial statement audit under the Chief Financial Officer's Act of 1990. Our objective was to determine whether effective business processes and interface processing controls were in place for the New Core Financial Management Solution. This audit is the fifth in a series of audits completed on the New Core Project implementation.

What We Found

Transaction processing using the New Core Financial Management Solution had improved, but challenges and weaknesses remained. Specifically, (1) transactions were inaccurately posted to the general ledger, and weaknesses still existed with transaction processing; (2) HUD had not completed reconciling the differences between the subledgers and the general ledger; and (3) the NCIS reconciliation tool was not effective. These conditions occurred because (1) an NCIS exclusion code was not recognized in HUDCAPS, there were timing issues with transaction processing and data entry errors in the crosswalk tables, funds were prematurely end dated for yearend close, and fund codes were erroneously disabled; (2) HUD did not have a process to ensure that a periodic reconciliation between the subsidiary ledgers and the general ledger took place before the New Core implementation, and lacked sufficient resources to assign to the subledger reconciliation project; and (3) HUD did not focus on the accuracy and usefulness of the NCIS reconciliation tool and reports, because resources were prioritized to improve NCIS transaction processing. Although HUD improved from what we found during our fiscal year 2016 audit work, (1) HUD continued to experience some weaknesses in transaction processing; (2) HUD cannot fully support the balances recorded in its general ledger; and (3) HUD did not fully reconcile data between HUDCAPS and its general ledger.

What We Recommend

We recommend that HUD (1) update yearend close procedures, (2) implement a data validation process for crosswalk entries, (3) improve the subledger reconciliation process and resolve unreconciled differences, (4) revise the NCIS reconciliation status of funds report, and (5) resolve the data reconciliation differences identified between HUD's Centralized Accounting and Program System and Oracle Financials.

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Background and Objective

The U.S. Department of Housing and Urban Development (HUD) relies on its information technology systems to accomplish its mission of providing cost-effective and reliable services to HUD, other Federal agencies, and the public at large. The New Core Project supported the integration activities associated with the migration of HUD's core accounting and administrative system functions to the U.S. Department of the Treasury, Bureau of Fiscal Services' Administrative Resource Center (ARC) shared service environment.

The current functionality of the New Core Project was implemented October 1, 2015. In a previous Office of Inspector General (OIG) audit[1] of the New Core Project implementation, we concluded that HUD's transition to a Federal shared service provider did not significantly improve the handling of financial management transactions for HUD. We found that 1 year following the transition, HUD had inaccurate data resulting from the conversions and continued to execute programmatic transactions in its legacy applications. We also found that the transition increased the number of batch processes required to record programmatic financial transactions and introduced manual processes and delays for budget and procurement transactions.

HUD's New Core Interface Solution (NCIS) is a custom developed system owned by HUD's Office of the Chief Financial Officer and hosted by Oracle Managed Cloud Services. NCIS performs the extract, transform, and load functions, as well as a variety of error processing, reconciliation, and interface file management functions to support the interface of HUD systems with ARC's systems. NCIS is used to (1) transfer budget information to legacy systems from Oracle Federal Financials[2] used by ARC and (2) transfer programmatic financial transactions from legacy systems to Oracle Financials. In both instances, NCIS translates this information between HUD's Centralized Accounting and Program System (HUDCAPS)[3] account code structure and the Oracle Financials accounting flex field.[4] All data are sent to and from NCIS through HUD's secured file transfer protocol (SFTP) server.[5]

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[1] Audit Report 2017-DP-0001, HUD's Transition to a Federal Shared Service Provider Failed To Meet Expectations, issued February 1, 2017

[2] Oracle Federal Financials is a common term used to describe a collection of Oracle E-Business Suite modules and functionality used by U.S. Federal Government agencies.

[3] HUDCAPS is HUD's former core accounting application. It captures, controls, and summarizes the results of the accounting processes for HUD's program funds. Before October 1, 2015, it was HUD's general ledger and system of financial records.

[4] The accounting flex field is a feature within Oracle Financials applications that provides a flexible way for the applications to represent objects such as accounting codes. The accounting flex field aligns to the Common Government-Wide Accounting Classification structure. This structure represents an accounting classification, which provides a consistent means for classifying financial events that enables the summarization and reporting of information in a meaningful way.

[5] An SFTP server is a server running secure file transfer protocol. SFTP is a secure version of file transfer protocol, which facilitates data access and data transfer over a secure shell data stream.

Under the shared service agreement, ARC is responsible for producing external regulatory and consolidated financial reporting on behalf of HUD. HUD is responsible for validating and certifying the ARC-generated financial statements for inclusion in the annual financial report. Oracle Financials is the financial system of record for HUD.

This audit was conducted as a component of the internal control assessments required for the fiscal year 2017 financial statement audit under the Chief Financial Officer's Act of 1990. Our objective was to determine whether effective business processes and interface processing controls were in place for the New Core Financial Management Solution. This audit is the fifth in a series of audits completed on the New Core Project implementation.

Results of Audit

Finding 1: Although Transaction Processing Had Improved Weaknesses Remained

Transaction processing using the New Core Financial Management Solution had improved, but challenges and weaknesses remained. Specifically, (1) transactions were inaccurately posted to the general ledger, and weaknesses still existed with transaction processing; (2) HUD had not completed reconciling the differences between the subledgers and the general ledger; and (3) the NCIS reconciliation tool was not effective. These conditions occurred because (1) an NCIS exclusion code was not recognized in HUDCAPS, there were timing issues with transaction processing and data entry errors in the crosswalk tables, funds were prematurely end dated for yearend close, and fund codes were erroneously disabled; (2) HUD did not have a process to ensure that a periodic reconciliation between the subsidiary ledgers and the general ledger took place before the New Core implementation, and lacked sufficient resources to assign to the subledger reconciliation project; and (3) HUD did not focus on the accuracy and usefulness of the NCIS reconciliation tool and reports, because resources were prioritized to improve NCIS transaction processing. Although HUD improved from what we found during our fiscal year 2016 audit work, (1) HUD continued to experience some weaknesses in transaction processing; (2) HUD cannot fully support the balances recorded in its general ledger; and (3) HUD did not fully reconcile data between HUDCAPS and its general ledger.

HUD Continued To Experience Transaction Processing Errors

HUD continued to experience transaction processing errors between HUDCAPS and Oracle Financials. Although there was improvement from our fiscal year 2016 audit, we found multiple issues had been identified and resolved through the OCFO Systems error handling process. Transactions were inaccurately sent from HUDCAPS to Oracle Financials for posting through the NCIS interface because an NCIS exclusion code was not recognized in HUDCAPS. In addition, we found errors in both the NCIS budget and general ledger processing due to timing issues. We found additional errors in the NCIS general ledger interface processing due to (1) data entry errors in the crosswalk tables, (2) prematurely end dating funds for yearend close, and (3) disabling fund codes because of modifications made during data conversion cleanup. Office of Management and Budget (OMB) Circular A-123 (II. Standards, part C) requires agencies to design application controls to ensure that transactions are properly authorized and processed accurately and that the data are valid and complete. These errors required HUD to make adjustments to its general ledger for reporting and reinforced the need for HUD to continue to pay for support services for errors encountered with the continued use of legacy systems and an interface to the official system of record.

HUD staff erroneously processed transactions through the NCIS interface that made funding amounts inaccurate in Oracle Financials. This error occurred on November 17, 2016, while HUD staff was performing regular cleanup of documents using expired funds as part of the yearend activities in HUDCAPS. These transactions were not to be sent to Oracle Financials for

posting because this activity was unique to HUDCAPS. HUD staff attached an exclusion code to these cleanup records to prevent the transactions from being sent to NCIS. However, as the file was loaded into HUDCAPS, the records lost the exclusion code as they posted. During the nightly HUDCAPS generation of the Admin Journal Detail file, which was sent to NCIS, 196 lines that used the expired funds with a blank exclusion code were included. As Oracle Financials received the records, it encountered cross validation rule[6] violations (level 2 errors)[7] and failed funds reservation errors (level 3 errors).[8] However, when there was funding available, some records posted successfully. The records that posted in error in Oracle Financials affected 29 funds. The absolute value[9] of the impact to the general ledger was about $186 million, with approximately $93 million of this debit and $93 million credit.

The transactions that were posted to Oracle Financials in error caused HUD to make adjustments to its general ledger for reporting. To do this, HUD created a temporary journal entry, removing 192 transactions from the general ledger because of month end reporting requirements and to ensure reporting figures were accurate. The permanent resolution for this issue was implemented in December 2016. HUD first posted reversing entries in HUDCAPS and allowed them to flow through NCIS to Oracle Financials. Once this process was completed, HUD created a second journal entry to reverse the temporary journal entry previously entered. According to HUD, these transactions would not be processed as a batch in the future but, instead, would be processed individually.

Transaction processing errors were encountered for both the NCIS budget and general ledger interfaces because of timing issues. Timing errors occur when a transaction fails because a prerequisite transaction or action has not yet processed. The errors occurred because HUD continued to rely on the legacy systems (HUDCAPS) to do a large portion of the financial management functions and then interface the transactions to Oracle Financials, which is the official system of record. The use of the interface subjected transaction processing to timing issues and obsolete tables and processes remained as a pass-through for other processing to occur. The absolute value of the timing errors was more than $132 million debit and $132 million credit.

Transaction processing errors were encountered for the general ledger interface because of data entry errors in the crosswalk tables, end dating funds prematurely, and erroneously disabling funds during data clean up. HUD continued to experience data entry errors in the crosswalk

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[6] Cross validation rules allow or prohibit the combination of certain accounting flex field values. The accounting flex field represents the accounting strip or line of accounting and must be present on every transaction in the Oracle Financials application.

[7] Level 2 errors result from validations performed by the system, which extract the data from the staging tables and write it to an import table. The validations are designed to catch errors before they are entered into Oracle Financials.

[8] Level 3 errors occur after the transaction has been created in Oracle Financials. The rules that have been violated at this point require individuals to take corrective actions to allow the transaction to post in the Oracle Financials application.

[9] The absolute value of a real number is the value without regard to its sign.

tables. For example, there were 42 cross validation errors on November 17 and November 18, 2016, because of a data entry error in the crosswalk tables. The errors occurred on consecutive days because the error was not resolved until November 18. The absolute values of the incorrect transactions was more than $7 million debit and $7 million credit on each date.

HUD end dated several funds prematurely. At the end of the fiscal year OCFO Systems worked to identify the funds that were cancelling, and anticipated when they would be flowing through the interface. However, the resulting calculation was a day too soon. Once the end date was established, the accounting flex field was disabled. On October 6, 2016, HUD encountered 58 level 2 transaction processing errors because of disabled accounting flex fields. To correct these errors, the established end date was removed. This action re-enabled the fund and allowed the transactions to post. The absolute value of these incorrect transactions was more than $1.5 million debit and $1.5 million credit.

HUD erroneously disabled funds during data conversion cleanup. For example, during cleanup of the converted data for fund 0108, all of the money allocated for this fund was moved to the direct fund code. On November 18, 2016, a level 3 reservation error occurred for fund 0108 using the reimbursable fund code. However, the reimbursable fund code was no longer enabled in Oracle Financials and had no available funds. HUD later determined that the reimbursable fund code was needed and re-enabled it, allowing the transactions to process. Four errors were encountered on November 18, 2016, and one on December 21, 2016, which totaled absolute values of $164,900 debit and $109,933 credit.

The errors that were encountered from timing issues, prematurely end dating funds for end of year close and disabling of funds during data conversion cleanup had minimal impact on financial processing. However, they reinforced the need for HUD to continue to pay for support services for errors encountered with the continued use of legacy systems and an interface to the official system of record.

HUD Had Not Completed Reconciling Differences Between the Subsidiary Ledgers and the General Ledger

HUD had not completed reconciling the differences between the subsidiary ledgers and the general ledger. According to the subledger differences log provided by Office of the Chief Financial Officer (OCFO) on June 1, 2017, the absolute value of the remaining differences to be resolved was approximately $1 billion for those identified up to September 30, 2016, and $3.6 billion for those from October 1, 2016, forward. OMB Circular A-123 (II. Standards, part C) requires agencies to establish controls at an application's interfaces to verify inputs and outputs. The differences existed because HUD did not have a process to ensure that a periodic reconciliation between the subsidiary ledgers and the general ledger took place before the New Core implementation. In addition, HUD did not have sufficient resources to assign to the fiscal year 2017 process. As a result, HUD's focus for the project had been on the differences identified in fiscal year 2016. HUD had not assigned staff to assess the differences identified in fiscal year 2017. However, some items had been resolved.

Based on audit work performed during fiscal year 2016 by OIG's Information System Audit Division and Financial Audit Division (FAD), we reported[10] that ARC had been unable to reconcile the HUD balances converted to Oracle Financials (general ledger) on October 1, 2015, and the balances from transactions in HUD's legacy applications (subledgers). For the reconciliations that ARC performed through September 2016, differences totaling $29.38 billion were identified. The differences remained unresolved primarily because HUD could not identify and locate sufficient documentation to support material United States Standard General Ledger (USSGL) accounts. The unresolved differences were material and pervasive and impacted several USSGL accounts and financial statement line items. The remaining differences, combined, were material to the financial statements. As a result of HUD's inability to support the balances recorded in the USSGL with sufficient, adequate documentation, we were unable to rely on the balances presented in HUD's consolidated balance sheet and the combined statement of budgetary resources.

FAD made four recommendations to the Deputy Chief Financial Officer related to the unresolved differences identified up to September 30, 2016. They are summarized as follows: (1) develop and implement standard operating procedures, (2) continue the subledger reconciliation project and complete it in a timely manner, (3) perform a root cause analysis, and (4) communicate the impact of system limitations that contributed to unreconciled balances. All four recommendations remained open.

HUD uses a subledger differences log to track its progress. Based on the log provided by OCFO on June 1, 2017, the absolute value of the remaining differences to be resolved totaled approximately $4.8 billion. See the table below for details.

Status of reconciliation project			
	Differences identified up to September 30, 2016	Differences identified October 1, 2016, forward	Total
Completed	$ 37,309,883,560.77	$ 10,773,018,969.83	$ 48,082,902,530.60
Not resolved	1,193,927,635.14	3,585,474,315.82	4,779,401,950.96
Total	38,503,811,195.91	14,358,493,285.65	52,862,304,481.56

Of the approximately $3.6 billion in unresolved differences identified after October 1, 2016, audit work performed by FAD determined that two items totaling approximately $3.3 billion had

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[10] Audit Report 2017-DP-0001, HUD's Transition to a Federal Shared Service Provider Failed To Meet Expectations, issued February 1, 2017, and Audit Report 2017-FO-0005, Fiscal Years 2016 and 2015 (Restated) U.S. Department of Housing and Urban Development Consolidated Financial Statements Audit (Reissue), issued March 1, 2017

been resolved during January 2017. However, the items remained on the subledger differences log provided to us on June 1, 2017.

Below are some examples of unresolved items on the log used to track the differences between the subsidiary ledgers and the general ledger. The examples are attributed to conversion errors, unavailable subledger data, unsupported general ledger balances, and possible overspending. The dollar amounts are reported as absolute values.

1. While HUD had made progress in resolving the more than $503 million in differences attributed to conversion, there remained more than $754 million that had not been resolved. Of the amount not resolved, more than $752 million was identified up to September 30, 2016, and almost $3 million was identified after October 1, 2016. The log indicated multiple reasons for the differences, some of which were invalid balances or amounts being placed in the wrong fund.

2. We found 23 records with differences identified by ARC up to September 30, 2016, totaling more than $25 million, in which subledger data were still needed. The subledger had detailed information about transactions posted in Oracle Modules,[11] miscellaneous feeder systems,[12] and independent records.[13]

3. There were 11 records totaling more than $217 million, in which the log indicated that the balance in the general ledger was not supported. Ten of the records totaling more than $216 million had differences identified up to September 30, 2016, and were being worked on. One of the records, with a difference of more than $1.6 million, was identified in April 2017 but work to resolve it had not started.

4. The differences log showed that for fund HUD0303DBXXXXXXX (Project-Based Rental Assistance HUD program), there was a difference in the amount of about $21,000 identified by ARC during April 2016. The log showed that overspending may have occurred for a Program Accounting System (PAS)[14] project. HUD was still researching this item.

The differences existed partly because HUD did not have a process to ensure that a periodic reconciliation between the subsidiary ledgers and the general ledger took place before the New Core implementation. In a December 2013 audit report,[15] FAD reported that reconciliations were performed only when requested by OIG during routine audit procedures. It concluded that as a result, differences that existed between the two ledgers were not identified and resolved in a

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[11] Accounts Payable, Accounts Receivable, Fixed Assets, Purchasing
[12] HUDCAPS, PAS, Line of Credit Control System, Nortridge Loan System
[13] Schedules or documents from accounting or program offices
[14] PAS is an integrated subsidiary ledger for HUD's grant, subsidy, and loan programs. PAS maintains accounting records based on receipt of funding authorizations from HUDCAPS, which generates transaction activity at different levels.
[15] Audit Report 2014-FO-0003, Additional Details To Supplement Our Report on HUD's Fiscal Years 2013 and 2012 (Restated) Financial Statements, issued December 16, 2013

timely manner. FAD reported that in response to a similar finding reported in a management letter,[16] the Accounting Monitoring and Analysis Division stated that it planned to hire a contractor and work with the OCFO Systems Division to determine the appropriate system reports needed to complete the reconciliations and create and document reconciliation policies and procedures. However, because of budget and staffing limitations, no action was taken. Additionally, HUD management decided that since it was planning to implement a new accounting system, it would be in its best interest to wait until after the implementation of the new accounting system to create the procedures.

In addition, between September 2016 and January 2017 HUD did not have sufficient resources to assign to this process, and the contract with the vendor initially tasked with developing reports and assigning fund differences for reconciliation ended in November 2016. As a result, HUD's focus for the project had been on the differences identified in fiscal year 2016. HUD had not assigned staff to assess the differences identified in fiscal year 2017, but some items that were easy to remedy had been resolved. However, some items remained in the log because OCFO had not provided the necessary supporting documentation to ARC.

Until HUD reconciles all of the differences, it will be unable to fully support the balances recorded in its general ledger. Subledger reconciliations provide assurance regarding the completeness and accuracy of records. They support the amounts in the financial statements by ensuring that the controlling accounts in the general ledger equal subledger balances. It is important to support the general ledger balances with subledger detail or independent records and identify any differences between the two. When differences are not identified in a timely manner, the number of transactions and time and research needed to reconcile the differences increase.

The NCIS Reconciliation Tool Was Not Effective

HUD did not have an effective process to reconcile data between HUDCAPS and Oracle Financials. Specifically, the trial balance reports from the NCIS reconciliation tool were not fully available for the first 4.5 months of fiscal year 2017, and the NCIS status of funds reconciliation report did not have accurate or useful information. The Federal Managers' Financial Integrity Act requires agencies to establish internal control and financial systems that provide reasonable assurance of the effectiveness and efficiency of operations and the reliability of financial reporting. HUD delayed taking action to correct the reconciliation reports because it prioritized improving NCIS transaction processing.

In September 2016, we reported[17] that the automated reconciliation tool within NCIS was not fully functional for the first 9 months of the fiscal year and manual reconciliations were not performed. This condition occurred because the New Core project management team did not move the scheduled implementation date when development of the functionality required for the

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[16] OIG management letter, Fiscal Year 2011 Management Recommendations, issued January 14, 2012
[17] Audit Report 2016-DP-0004, HUD Rushed the Implementation of Phase 1 Release 3 of the New Core Project, issued September 20, 2016

data reconciliation tool could not be completed by that date. Instead of delaying implementation until the tool was fully functional, HUD decided to implement it on October 1, 2015, and rely on exception reports, which were used to assist the operations team in resolving processing errors. The trial balance[18] reconciliation reports were not fully functional until April 7, 2016, half way through the fiscal year, because an accurate version of the beginning balances file was not available for use within the tool until that time. In addition, the implementation of the status of funds reconciliation report[19] was extended because of the excessive amount of time it took to reconcile the conversion activities. HUD did not produce this report until the end of the third quarter of the fiscal year. We received a copy of the report on June 27, 2016. The report showed differences for 954 accounts with an absolute value of approximately $4.5 billion. We issued a recommendation that the OCFO verify that the NCIS trial balance and status of funds reconciliation reports function properly and resolve the differences.[20] The OCFO has not completed the corrective actions to address this recommendation.

The NCIS reconciliation tool requires beginning balance information from Oracle Financials to calculate other balances based on current fiscal year activity. The fiscal year 2017 beginning balances file was not loaded into NCIS until February 9, 2017. As a result, a fully functional set of NCIS reconciliation reports was not produced until that time. The trial balance reports did not show a complete picture of beginning balances and activity and calculate the ending balance before February 2017. As a result of the delay in loading the file, HUD had limited reconciliation functionality for the first 4.5 months of the fiscal year.

Our review of the NCIS status of funds report, dated May 22, 2017, showed a difference between HUDCAPS and Oracle Financials (HUD's general ledger) totaling an absolute value of more than $39 billion. We met with OCFO Systems Division staff in June to discuss the accuracy and reliability of these reports and concluded that the information in the NCIS status of funds reconciliation report was not accurate or useful. For example, the status of funds report would show zero dollars available for some funds, but the funding amounts would appear in Oracle Financials on the Discoverer Viewer reports.[21] We were also told that since the reports had been a challenge to use, both OCFO's Accounting Monitoring and Analysis Division and Systems Divisions were using other methods to reconcile the data between the two systems and double checking the balances.

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[18] A trial balance is a list of all accounts (both revenue and capital) contained in the general ledger. The NCIS trial balance report provides beginning balances, fiscal year activity, and ending balances, for general ledger activity passed between HUDCAPS and Oracle.

[19] The NCIS status of funds report provides summarized balances of available budgetary resources, commitments, obligations, paid expenditures, and available balances for both HUDCAPS and Oracle Financials, along with the calculated differences between the two systems.

[20] Recommendation 1F from Audit Report 2016-DP-0004, HUD Rushed the Implementation of Phase 1 Release 3 of the New Core Project, issued September 20, 2016

[21] Discoverer Viewer allows users to view preestablished reports of queries against Oracle databases, including Oracle Federal Financials.

To address the issues, OCFO Systems staff planned to redesign the reports. Until that is completed, according to OCFO Systems, it would rely on the following to ensure that all activity was posted properly:

- OCFO Systems staff conducts daily monitoring of interface processing (Oracle Financials to NCIS, NCIS to HUDCAPS, HUDCAPS to PAS, etc.) and error resolution of entries that may not have posted. The staff conducts a detailed analysis of the entries and postings in both HUDCAPS and Oracle Financials to ensure that the entries properly posted.
- OCFO Systems staff receives a line-by-line confirmation on the individual transactions that are sent nightly through the NCIS general ledger confirmation file. If the staff encounters an Oracle Financials cross validation rule error, it works with ARC and any key stakeholder to resolve the issue and ensure that the transactions post properly.
- OCFO Systems staff receives confirmation of the HUDCAPS budget postings through the ADMIN detail journal file, which is also where it gets the general ledger entries from HUDCAPS.

While the compensating controls cited by the OCFO Systems staff will help determine whether transaction processing was complete and accurate, there was no overall comparison between the two systems to show differences or that balances were in agreement. An overall data reconciliation between HUDCAPS and Oracle Financials is essential because actions after successful transaction processing like journal entry adjustments could cause differences. Although, OCFO Systems monitored transaction processing, accurate reconciliation reports would have provided a tool for use in ensuring that the data in HUDCAPS and Oracle matched after updates to Oracle via journal entries. During the first two quarters of fiscal year 2017, there were approximately 1,393 journal entries processed in Oracle Financials with adjustments totaling more than $428 billion.

Conclusion
HUD encountered significant challenges with its transition to ARC's financial management services and Oracle Financials. While there had been significant improvements to transaction processing, challenges and weaknesses remained. The implementation of the New Core Project increased the number of batch processes required to record programmatic financial transactions. This also increased the number of opportunities for data to be modified between HUD's legacy applications' subledgers and the general ledger maintained in Oracle Financials. We found multiple issues had been identified and resolved through the OCFO Systems error handling process. Transactions were inaccurately sent from HUDCAPS to Oracle Financials for posting through the NCIS interface because an NCIS exclusion code was not recognized in HUDCAPS. In addition, we found errors in both the NCIS budget and general ledger processing due to timing issues. We found additional errors in the NCIS general ledger interface processing due to (1) data entry errors in the crosswalk tables, (2) prematurely end dating funds for yearend close, and (3) disabling fund codes because of modifications made during data conversion cleanup.

HUD did not have a process to ensure that a periodic reconciliation between the subsidiary ledgers and the general ledger took place before the New Core implementation. Although HUD had improved its processes to reconcile data between its subledgers and its general ledger, additional efforts are needed. HUD had not assigned staff to assess the differences identified in fiscal year 2017, because they did not have sufficient resources. As a result, HUD's focus for the project had been on the differences identified in fiscal year 2016.

It is also critical to keep HUD's financial data in sync between the legacy HUDCAPS system, which is still relied upon for processing programmatic funds, and the Oracle Financials general ledger. The intent of the NCIS Reconciliation Reporting Tool was to identify differences between the two systems and show that available budgetary balances were in agreement. As a result of the delay in loading the beginning balances, the reconciliation tool provided limited reconciliation functionality through the first 4.5 months of the fiscal year. In addition, the NCIS status of funds reconciliation report did not have accurate or useful information, and compensating controls cited by HUD did not provide an overall comparison between the two systems to show differences or that balances were in agreement, which is necessary to ensure accurate financial management and reporting.

Recommendations
We recommend that the Office of the Chief Financial Officer

1A. Update yearend close procedures to mitigate repeat processing errors and reduce the processing time of future yearend closeouts.

1B. Implement a data validation process to ensure the accuracy of the NCIS crosswalk table entries.

1C. Resolve the unreconciled subledger differences identified after October 1, 2016.

1D. Implement improvements to the subledger reconciliation process that will allow HUD to provide supporting subledger details to ARC in a timely manner.

1E. Obtain the beginning balance file earlier in the year for use with the NCIS reconciliation tool.

1F. Once NCIS reconciliation reports are available, implement a process for identifying and resolving data differences.

Scope and Methodology

The audit covered the period October 1, 2016, through July 21, 2017. We performed the audit at HUD headquarters in Washington, DC. Audit work was conducted from December 5, 2016, through July 21, 2017. Our audit was based on the U.S. Government Accountability Office's Federal Information System Controls Audit Manual methodology and information technology guidelines established by the National Institute of Standards and Technology.

We conducted the audit to determine whether effective business processes and interface processing controls were in place for the New Core Financial Management Solution.

To evaluate the internal controls, we

- identified and documented key system components,
- interviewed HUD and contractor staff,
- assessed interface processing to determine whether it was adequately controlled,
- assessed the department's efforts to reconcile differences between the subsidiary ledgers and the general ledger,
- assessed the interfaced data and errors encountered between HUDCAPS and Oracle Financials to determine whether validation checks and error handling were in place, and
- assessed the data reconciliation process for ensuring the data were adequately reconciled between the source and target systems.

We conducted the audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective(s). We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

Internal Controls

Internal control is a process adopted by those charged with governance and management, designed to provide reasonable assurance about the achievement of the organization's mission, goals, and objectives with regard to

- effectiveness and efficiency of operations,

- reliability of financial reporting, and

- compliance with applicable laws and regulations.

Internal controls comprise the plans, policies, methods, and procedures used to meet the organization's mission, goals, and objectives. Internal controls include the processes and procedures for planning, organizing, directing, and controlling program operations as well as the systems for measuring, reporting, and monitoring program performance.

Relevant Internal Controls
We determined that the following internal controls were relevant to our audit objective:

- Interface controls
- Controls over the data reconciliation processes

We assessed the relevant controls identified above.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, the reasonable opportunity to prevent, detect, or correct (1) impairments to effectiveness or efficiency of operations, (2) misstatements in financial or performance information, or (3) violations of laws and regulations on a timely basis.

Significant Deficiencies
Based on our review, we believe that the following items are significant deficiencies:

- HUD continued to experience transaction processing errors between HUDCAPS and Oracle Financials (finding 1).

- HUD's subledger reconciliation was not complete (finding 1).

- The NCIS reconciliation tool was not effective (finding 1).

Follow-Up On Prior Audits

HUD Rushed the Implementation of Phase 1 Release 3 of the New Core Project. Audit report number 2016-DP-0004.

Six recommendations were issued within audit report 2016-DP-0004. We concurred on the action plans submitted by the OCFO for all six recommendations. One of the six recommendations from the previous audit is significant within the context of the objectives for this audit. Recommendation 1F was to verify that the NCIS trial balance and status of funds reconciliation reports function properly and resolve the differences. The OCFO's target completion date to implement this recommendation is December 5, 2017. In July 2017, the OCFO informed us that they anticipate that additional time will be needed to complete these actions.

**Ref to OIG
Evaluation**

Auditee Comments

Comment 1

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-3000

OFFICE OF THE CHIEF FINANCIAL OFFICER

August 28, 2017

MEMORANDUM FOR: Dorothy Bagley, Director, Information Systems Audit Division, GAA

FROM: Joseph I. Hungate III, Assistant Chief Financial Officer for Systems, FY

SUBJECT: Response to OIG Draft Audit Report titled, "New Core Project: New Core Financial Management Solution", issued August 24, 2017.

This memorandum is in response to your August 24, 2017 Draft Audit Report (2017-DP-00XX) titled, "New Core Project: "New Core Project: New Core Financial Management Solution (Although Transaction Processing Had Improved, Weaknesses Remained)", issued August 24, 2017. We have reviewed this report and have provided our responses below.

Comments
In response to page 5, last paragraph, "HUD staff erroneously processed transactions through the NCIS interface that made funding amounts inaccurate in Oracle Financials", prior to OIG's review, this issue was immediately identified through the OCFO Systems error handling process and a short term/long term solution were put into place. Once remediation was completed, OCFO Systems documented lessons learned.

Regarding page 6, footnote 8, "Level 3 errors occur after the transaction has been created in Oracle Financials. The rules that have been violated at this point require an Oracle Financials user to correct the transaction in the Oracle Financials application", an Oracle user cannot correct, or touch the transaction. To resolve the level 3 error, the underlying cause of the error must be addressed either in Oracle or in HUD's legacy systems as applicable.

In response to page 6, last paragraph, "Transaction processing errors were encountered for the general ledger interface because of data entry errors in the crosswalk tables, end dating funds prematurely, and erroneously disabling funds during data clean up," this error was identified and immediately corrected through the OCFO Systems error handling process.

In regards to page 7, first paragraph, "For example, there were 42 cross validation errors on November 17 and November 18, 2016, because of a data entry error in the crosswalk tables. The errors occurred on consecutive days because the error was not resolved until November 18. The absolute values of the incorrect transactions were more than $7 million debit and $7 million credit on each date", OCFO immediately identified these errors and resolved them through the OCFO Systems error handling process."

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Auditee Comments and OIG's Evaluation

Ref to OIG Evaluation

Auditee Comments

Comment 1

In response to page 10, first paragraph, "differences that existed between the two ledgers were not identified and resolved in a timely manner", due to the OCFO Systems error handling process, OCFO Systems could detect and remediate errors in a timely manner.

Comment 2

Regarding page 11, footnote 18, "A trial balance is a list of all accounts (both revenue and capital) contained in the general ledger. A trial balance is a list of all accounts (both revenue and capital) contained in the general ledger. The NCIS trial balance report provides beginning balances, fiscal year activity, and ending balances, for both HUDCAPS and Oracle." Please remove the duplicate Sentence "A trial balance is a list of all accounts (both revenue and capital) contained in the general ledger." Additionally, this footnote is misleading, since the reports from NCIS only show the data related to what has gone through the NCIS interface, it would not have all the information that would be available in Oracle's GL.

Finding 1: Although Transaction Processing Had Improved Weaknesses Remained
OIG Recommendation 1A: Update yearend close procedures to mitigate repeat processing errors and reduce the processing time of future yearend closeouts.

Comment 3

OCFO Response to Recommendation 1A: OCFO has already updated FY 2017 year-end close procedures to mitigate repeat processing errors and to reduce the processing time of future year end closeouts.

OIG Recommendation 1B: Implement a data validation process to ensure the accuracy of the NCIS crosswalk table entries.

Comment 4

OCFO Response to Recommendation 1B: OCFO Systems has already developed and implemented an error handling process that assisted with identifying and resolving errors in timely manner. Additionally, OCFO Systems documented lessons learned to reduce repeat processing errors from reoccurring.

OIG Recommendation 1C: Resolve the unreconciled subledger differences identified after October 1, 2016.

OIG Recommendation 1D: Implement improvements to the subledger reconciliation process that will allow HUD to provide supporting subledger details to ARC in a timely manner.

OCFO Response to Recommendation 1C and 1D:
- Recommendation 1C and 1D appear to be duplicative and overlapping with 2017-FO-0003-003. How are the new recommendations different from the existing OIG recommendations?

Comment 5

- A process document for the sub ledger reconciliation between HUD and ARC has been drafted and is under management review.

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Ref to OIG Evaluation	**Auditee Comments**

Comment 6

Comment 7

Comment 8

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OIG Recommendation 1E: Obtain the beginning balance file earlier in the year for use with the NCIS reconciliation tool.

OCFO Response to Recommendation 1E: OCFO will implement this recommendation.

OIG Recommendation 1F: Revise the NCIS Status of Funds reconciliation report to be more useful for OCFO's Systems Division.

OCFO Response to Recommendation 1F: OCFO will implement this recommendation.

OIG Recommendation 1G: Resolve the NCIS data reconciliation differences identified.

OCFO Response to Recommendation 1G: OCFO will implement this recommendation.

We look forward to working with you and your staff to resolve and close-out the recommendations.

If you have any questions or need additional information, please contact Christopher B. Davies at 202-402-3758.

cc:
Christopher B. Davies, Deputy Assistant CFO for Systems, FY
Simin D. Narins, Director, Financial Systems Quality Assurance Division, FYA
MelaJo K. Kubacki, Deputy Assistant CFO for Financial Management, FM
Larry McGhee, Director, Audit Liaison Division, FMA

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OIG Evaluation of Auditee Comments

Comment 1   We disagree with the OCFO's comments. Within the audit report, we state that we found multiple issues that had been identified and resolved through the OCFO Systems error handling process. We feel that the report gives the department adequate credit for the improvements made to their processes. No changes were deemed necessary to the report.

Comment 2   Based on additional information received during the audit exit conference and OCFO's comments and concerns about footnote numbers 8 and 18, we made modifications to those footnotes within the report.

Comment 3   We have not received documentation in support of OCFO's comments; therefore, we cannot make an assessment regarding them. The information within the report reflects the information provided by the OCFO during the audit period.

Comment 4   The OCFO provided the error handing policies and procedures completed in August 2017, in support of their comments. We assessed the documentation provided and agree with the OCFO. We will close this recommendation when the report is issued.

Comment 5   We disagree with the OCFO's comments. Recommendations 1C and 1D relate to the resolution of differences identified following October 1, 2016 specifically. The recommendations issued in Finding 3 of OIG audit report 2017-FO-0003 relate to the resolution of differences identified prior to October 1, 2016. No changes were deemed necessary to the report.

Comment 6   We look forward to working with the OCFO to resolve this recommendation.

Comment 7   Recommendation 1F within the draft report was to revise the NCIS Status of Funds report. We were provided additional information during the exit conference in regards to the OCFO's concern that this recommendation was duplicative of open recommendation 1F issued in OIG Audit report 2016-DP-0004. We agree with the OCFO. We added information within the body of the report regarding the open recommendation from the prior audit report and removed the recommendation from this audit report.

Comment 8   Within the draft report, this recommendation was numbered 1G, but has now been renumbered to 1F. We were provided additional information during the exit conference in regards to the OCFO's concerns regarding how this recommendation was written in the draft report. Based on our review of the information provided, we agree that the OCFO's proposed revision added clarity to the recommendation and revised the recommendation in this audit report. The recommendation was changed to read implement a process for identifying and resolving data differences once the reports are available.