



Project Nova

Internal Audit Assessment

As of March 19, 2018

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Internal Audit Assessment – Project Nova as of 3/19/18

Legend:				
				
On Track	At Risk	Needs Intervention	Not Started	Completed

Overall Status as of 3/19/18	
Management	IAG
At Risk	Concurs with management

Summary IAG Assessment¹

On 3/19/18, the Project Nova Steering Committee decided to postpone the go-live date from 4/1/18 to 5/1/18. Progress has been impeded by delays in Clearwater (“CW”) deliverables due to capacity issues, issues with timeliness of Clearwater data feeds and accuracy of transmitted data. These delays, in turn, are having a cascading effect on AIG IT deliverables and management testing efforts. Investment Operations continues to work with CW to **gain more insight and comfort over CW custodian reconciliation process and to improve AIG’s ability to perform operational oversight** under the new operating model. Management acknowledged that advancement in this area has been slower than expected and escalated the identified concerns to AIG Senior Management and Clearwater.

IAG concurs with management’s assessment of the project status. Highlighted below are our key point-in-time observations:

- **Delays in implementation and parallel testing may not allow management enough time for issue identification and resolution.** Significant portions of the parallel tests, such as 1/1/2018 CW to PAM tie-out*, CW to IDR mapping, and SAP journal entry testing, have not yet been finished. Investment Operations testing has been impacted by CW & AIG implementation delays and encountered reconciliation issues; User Acceptance Testing/Parallel testing within downstream Investments and other groups (Investment Analytics, Public/Structured Products desks, ERM-IVFA) has largely not started or has been limited. (*Appendix A, items 1a, 2a, 3a, 4a, 5a, 6a*) (*This item has been completed and provided to IAG on 3/26/18.)
- **Key Risk Indicators, performance metrics and future state assessment have not been fully developed for post go-live monitoring.** Furthermore, **management needs to determine whether CW SOC 1 report is of sufficient quality & detail and can be relied on.** Additional assessment work around CW controls may need to be done to supplement information in the CW SOC 1 report. (*Appendix A, items 1b, 1c*)
- For deliverables that are scheduled to be provided after the go-live date, **management needs to obtain agreement with the appropriate end users to ensure that the level of risk is acceptable** (e.g. Front Office, IVFA; L3 level stakeholders). (*Appendix A, items 1d*)
- **Inconsistent awareness** of Clearwater transition impacts within Front Office; user acceptance testing resources not identified and user acceptance testing plans not developed (e.g. Structured Products). (*Appendix A, items 4b*)
- **Communication plans leading up to go-live are still in progress.** (*Appendix A, item 1e*)

Appendix A – Detailed Observations

IAG Observations as of 3/19/18 ¹		
IAG Area of Focus	IAG Observation	New / Prior Observation ²
1. Overall Project	<p>a. Delays in implementation and management testing may extend the current project's timelines or not allow management enough time for issue resolution. Significant portions of the parallel tests, such as 1/1/2018 CW to PAM tie-out*, CW to IDR mapping, and SAP journal entry testing, have not yet been finished by management. Investment Operations testing is ongoing, however, management acknowledged that they are not in full parallel processing due to CW & AIG implementation delays and encountered reconciliation issues. Refer to items 2a, 3a, 4a, 5a, 6a for more details. (*completed and provided to IAG on 3/26.)</p> <p>Additionally, due to delays discussed above in finalizing and documenting management's parallel/UAT testing, FCU and IAG may not have sufficient time to perform adequate testing. Refer to "Status of IAG Work" on slide 8 for details.</p>	PRIOR
	<p>b. Future vs. current state assessment of processes (facilitated by project leads) and a more detailed impact analysis of key controls (facilitated by FCU) is underway. Management expects to complete a deliverable that gives a 'good enough' view of the future operating environment that will be agreed with CW prior to go-live. A more granular analysis with assessment of specific controls may be completed after go-live. Additionally, management needs to determine whether the CW SOC 1 report is of sufficient quality & granularity and can be relied on. Overall, the description of controls is kept at a high level in the SOC 1 report and additional assessment work may be required, including evaluation for any customization performed by CW for AIG.</p>	PRIOR
	<p>c. A vendor oversight program with clearly defined scope and accountability needs to be established prior to go-live to ensure that the new platform is operating according to requirements and expectations. Currently Clearwater daily performance reporting is listed as a post go-live action item with a target date not yet determined. While CW Services Level Agreement lists a number of system operation and reconciliation/delivery services metrics, management needs to assess the list for comprehensiveness and implement mechanism/assign responsibilities for key metrics monitoring. Within Investment Operations area, key metrics have been defined and identified concerns (e.g. availability of necessary reporting) have been escalated to AIG and CW Senior Management. Implementation/testing work is ongoing.</p>	NEW
	<p>d. End-user concurrence - For items scheduled to be completed after go-live or those that have been pushed to completion later than the original expected timeframe, management should risk assess and discuss with the appropriate end-users (e.g. Front Office, Investment Analytics, ERM, Compliance owners, as applicable, including at the L3 level) and gain their concurrence to ensure that the level of risk is acceptable.</p>	NEW
	<p>e. Communication plans are still in progress and no project plan milestone exists for communication to all impacted stakeholders prior to go-live date that include clear protocols on post-go live support and trouble-shooting (e.g. who to call). We have observed communication messages to Microstrategy users; however, they appear to be ad hoc. Further follow-up with management is required for a more comprehensive communication plan.</p>	NEW
	<p>f. Back-Out Plan - Senior management has made the final decision to terminate the State Street service contract supporting the PAM application as of June 24, 2018. Access to the PAM system is planned to be cut-off immediately following the go-live date. A historical version of PAM will be available as read-only. Management accepts the risk that there is no viable back-out plan.</p>	NEW

1. Point-in-time IAG observations as of 3/19/18; based on inquiries and discussions with management & limited IAG testing.

2. "New" observation: First time inclusion of an observation in the IAG assessment.

"Prior" observation: An updated observation previously raised in the Project Nova Audit Assessment as of 2/7/18; other prior observations are included on page 7.

Appendix A – Detailed Observations (continued)

IAG Observations as of 3/19/18 ¹		
IAG Area of Focus	IAG Observation	New / Prior Observation ²
2. Investment Accounting and Tax	a. CW Opening balances testing - Management has not completed 1/1 opening balances reconciliation between Clearwater vs PAM (less than 1% remaining; now completed as of 3/26) and a completeness reconciliation to the 4Q2017 Financial Supplement. Delay in this reconciliation is due to various reasons and has a cascading effect on other key milestones , such as validation of 1/31 and 2/28 ending balances in CW/IDR, validation of general ledger (SAP) balances for period ending 1/31, and complete validation of IDR mapping (about 10% left to map for non-financial fields; financial fields mapping have been reported as completed).	NEW
	b. There are variances on certain residential mortgage loans (RMLs) for Accrued Interest Receivable (AIR) and FAS 91 (recognition of lending fees) components specific to 1/31 and 2/28 reconciliations being performed by management. These variances are specific to the RML portfolio which only comprises approximately 2% of total assets being transitioned to Clearwater. Clearwater continues to work on researching rationale of the variances as well as re-programming data points in an effort to reconcile the breaks.	NEW
	c. Financial Disclosures - There is no plan to conduct parallel testing of quarterly financial disclosures across GAAP, STAT, tax and IFRS. The decision is mainly based on that these disclosures use IDR data, which is expected to be tested thoroughly during parallel testing. Management is aware of the risk related to this approach and asserted that all potential issues related to the disclosures, if any, will be resolved between 4/1/2018 and 6/30/2018 (quarter-end). IAG is working with management to verify that all disclosure data comes from IDR.	PRIOR
3. Investment Operations	a. Parallel/management testing – Due to delays in CW development and other encountered issues, Investment Operations is not yet conducting full parallel testing . Data reconciliations/testing for Pricing, SMF, corporate actions just recently commenced. Cash/asset reconciliation testing continues. As a result of delays, completion of certain components from the original 2/28 Critical criteria checklist has been extended until 4/1/18 (e.g. cash projection/cash reporting). Management previously recognized that they may not have enough time to conduct appropriate amount of testing or fully resolve encountered issues with CW. The extension of the go-live date to 5/1 gives management more time for testing and should help alleviate this concern.	PRIOR
4. Investments (Other)	a. Management testing - Late identification of business requirements and/or ongoing implementation delays are having cascading effect on downstream testing timelines. The delays may not leave enough time for sufficient testing prior to the go-live date (e.g., performance measurement; production of Polypath analytics which, in turn, affect private placement pricing; cash flow generation for Structured Products desks; CIO and risk management (including ALM) monitoring). The extension of the go-live date to 5/1 gives management more time for testing and should help alleviate this concern.	PRIOR
	b. There is no central point of contact within Front Office responsible for coordination of business requirements and testing approach across the function (inclusive of Investment Analytics). Instead, Nova project leads have been working with representatives of individual desks/Investment Analytics. Despite these efforts, in February, some Front Office management indicated that they were not aware of the full scope of project Nova's impact on their business. Specific examples include: a) as of February-end, the ownership and method of producing and delivering Structured Products Cash Flows to Clearwater under FAS 91 requirement has not been finalized. Investment Accounting is working with Front Office and Investment Analytics to coordinate changes in the process; b) Front Office has not designed a user acceptance testing plan to ensure that all of their requirements have been met. IAG notes that the level of FO engagement has since increased and some communication gaps have been bridged. Further updates with the Front Office Senior Management are being prepared.	NEW

Appendix A – Detailed Observations (continued)

IAG Observations as of 3/19/18 ¹		
IAG Area of Focus	IAG Observation	New / Prior Observation ²
5. IT	a. CW to IDR Mapping - Approximately 10% of the 306 required fields identified by management have not yet been mapped between Clearwater and IDR / PAM. An incomplete population of mapped fields has caused delays in developing reconciliation test scripts and providing final validation of all fields and corresponding values. User Acceptance Testing by downstream users (e.g. Front Office) is contingent on completion of this step (refer to items 4a and 4b above).	NEW
	b. IT Implementation Plan - There is uncertainty regarding the ability to deliver some key technical components of the Clearwater implementation prior to the planned go-live date . Within the IT Plan document, several milestones for the SMF processing function (e.g., QA testing, Bloomberg and SMF data pub processing, new security setup) and the G/L feeds function (CW to SAP file format and process testing, IA signs off on CW to SAP interface) are listed as not started despite being past the targeted due date. The extension of the go-live date to 5/1 gives management more time for implementation and should help alleviate this concern.	NEW
6. ERM	a. IVFA has a dependency on IT and CW to provide solutions for processes that are being phased out due to the conversions. To date, certain key deliverables, such as the multi-source pricing report (needed for price challenge and financial control) and amortization schedules required for pricing of the Private Placement portfolio , have not yet been completed.	PRIOR
7. Project Management	Below are observations regarding the overall project management. Senior Management decided to not adopt the traditional/"waterfall" or agile project management methodology. The project leads (Investment Accounting, Investment Operations, and IT) each are responsible to run their respective component of the project with PMO facilitating overall project status reporting and certain non-implementation specific tasks (e.g. communication with HR, Legal, etc.).	
	a. The "CW project plan", which is being referenced/used by management as the "overall project plan", is too high level, is outdated and incomplete . The latest CW project plan as of 2/9/18 was provided to IAG on 3/13. It is missing/does not detail a number of deliverables agreed-upon with CW (e.g. private placement pricing, operational oversight and price validation reporting). The CW project plan is supplemented by project plans/task lists maintained by each workstream lead and the PMO to reflect AIG internal activities; however, documentation is not always timely maintained and interdependencies are unclear. For example, the User Acceptance Testing (UAT) testing phase for a number of functional requirements is not reflected, which may have contributed to uncertainty around Front Office testing plans and testing resources (refer to observation 4b).	NEW
	b. Business requirements – While high level business requirements for Clearwater are documented in the Statement of Work (SOW), detailed functional requirements for either CW or AIG internal development have been gathered/communicated verbally via "Deep Dive sessions" (e.g. SMF, PPV pricing process, cash projection/cash sleeve reports). Functional development documentation is needed to establish the foundation for UAT, trouble-shooting, when needed, and future changes. Also, impact assessment within some business areas is still ongoing (e.g. Structured Products Desks) and could lead to identification of additional requirements, previously not accounted for.	PRIOR
	c. Weekly status reports , prepared by the PMO with input from project leads and distributed to a broad spectrum of AIG stakeholders, may not provide sufficient transparency into the project for the stakeholders not involved in Nova day-to-day. IAG identified some inconsistencies and inaccuracies in reporting the status of action items and deliverables. Additionally, information in the report is not comprehensive and does not contain a status for all critical items (e.g. XNET feed, private placements operations related book of work).	NEW



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Appendix B – Prior Observations Significantly Mitigated by Management

Original Assessment Date	Prior IAG Assessments/Observations	Reassessment Date	Management Actions Taken
2/7/2018	Solution for capturing tax manual adjustments related to the internal sales in Clearwater has not yet been developed. These tax related adjustments are currently being processed in PAM.	3/19/2018	Tax team has been working with Clearwater and Investment Accounting in the past few weeks, specifically relating to the intercompany transactions that require manual adjustment's for tax.
2/7/2018	Derivative Accounting Group (DAG) was just recently made aware of the Clearwater implementation and its potential impact on the group's operations. As a result, the group is still in ongoing talks with Clearwater as well as Investment Accounting to understand Clearwater capabilities and potential need to alter DAG's current processes.	3/19/2018	DAG was included in the earlier Nova project discussions going back to October 2017. The recent re-organization may have caused the confusion. Nevertheless, DAG is actively engaging with front office, Clearwater and Investment Accounting to evaluate impact.
2/7/2018	Milestones on the "Go/No-Go Checklist" have not been fully defined against measurable criteria	3/19/2018	Management has developed a 'Day 1 critical' items list that they will manage to, leading up to the Go Live date.
2/7/2018	As a Tier 1 application, the Clearwater platform requires a Recovery Point Objective (RPO) of less than two hours. However, the Professional Service Agreement (PSA) specifies incremental backups are performed at a daily frequency, which could result in more than two hours of data being lost (i.e., up to 24 hours). Management need to assess if risk is acceptable or work with Clearwater to resolve.	3/19/2018	Management has provided the Professional Service Agreement (PSA) that outlines the RTO and RPO guidelines agreed to by Clearwater. The vendor has agreed to meet an RTO of 30 minutes and an RPO of 30 minutes, both of which align with AIG's Tier 1 application standards.
2/7/2018	IVFA plans to perform a production parallel after the currently scheduled go live date of April 1. With the decommissioning of GPS, there is a risk that IVFA exception reports (used for price challenge and financial controlling) will no longer function as intended. High dependency on IT for continuing to populate GPS tables with Multi-source pricing report from Clearwater system	3/19/2018	The implementation timeline has been agreed with IVFA as it will support their month end processes. Project Nova go-live date has been re-scheduled from 4/1/18 to 5/1/18. While experiencing slight delays due to dependency on CW development, IVFA is currently still on track to perform testing and subsequent sign off on 4/16. Additionally, IVFA has prepared a manual back-up plan if the new pricing report process is not operational by April month end.
2/15/2018 ¹	ERM representative(s) did not participate in the Project Nova Steering Committee meetings.	3/19/2018	Starting with the 3/2 Steering Committee meeting, Head of AIG Investments ORM has been added as a participant in an observer capacity.
2/7/2018	Issue tracking is not centralized as multiple issue logs are maintained. RAID (Risk Actions Issues and Decisions) Log, which is a formal governance artifact, does not capture all known concerns. Issues are not risk assessed for prioritization and target dates are not always established. Management is planning to develop a Day 1 critical issues list that they will manage to leading up to the Go/No-Go decision.	3/19/2018	In response to the finding, management has updated a Day 1 and Post Go-Live critical items lists and further developed a 30-day Plan in preparation for the Go/No-Go decision on 3/19/18.

1 – The observation was raised and discussed with management as a result of inquiry on 2/15/18; it was not included in the IAG assessment as of 2/7/18.

Appendix C – Outstanding Requests

Key Outstanding Requests¹

- Parallel testing results to-date:
 - **Validation of financial statement data in IDR:**
 - **Tie-out of 1/1/18 opening balances in CW vs. PAM** (received on 3/26/18)
 - **CW to PAM reconciliation at 1/31/18**
 - Validation of CW sourced accounting entries in SAP General Ledger at 1/31/18
 - CW vs PAM tie-out to the Financial Supplement
 - Testing scripts and results for Japan XNET feed
 - **IDR-to-Clearwater data mapping** (for non-financial fields only)
 - RML: CIDR vs. Clearwater Reconciliation at 1/31/ and 2/28
 - Downstream Users Testing Results (e.g. Investment Analytics, NAIC, Front Office)
- Supporting evidence for automated process and interface design configuration(s)
- Communication Plan leading up to Go-Live Date
- Clearwater support model for AIG
- **Future vs. Current State Assessment - process mapping and controls Impact analysis**
- CW Vendor Oversight Program (including full scope of post go-live monitoring criteria / performance and risk indicators)
- CW Project Plan (received 2/9/18 Plan on 3/13/18)

Status of IAG Work

Key Next Steps:

- Evaluate future state process flows and controls impact analysis – *pending receipt of documentation;*
- Assess management test scripts and results to support the “Day 1 Critical Checklist” items:
 - Investment Accounting/Tax – *pending receipt of documentation;*
 - Investment Ops - *Partial results and test scripts have been provided by Investment Operations; IAG review commenced*
 - IT – *pending receipt of documentation;*
 - Other key areas:
 - *Received documentation and initiated review of Private Placements Pricing testing results*
 - *Partial test results have been provided by NAIC team; IAG assessment commenced.*
- Assess the extent and timing of testing performed by downstream business users (e.g. Front Office, Investment Analytics) – *management testing has not yet started.*

Progress to date:

- Held regular discussions with management; continued engagement in:
 - Providing feedback on testing approach
 - IT walkthroughs to assess Day 1 deployment state
 - SOX/MAR control impact assessment facilitated by FCU
 - Control Partner meetings, weekly PMO updates, Steering Committee meetings
- Completed IAG's first “Project Nova Assessment” as of February 7, 2018
- Completed review of certain project management artifacts (project governance, project plan, vendor management due diligence, disaster recovery requirements) and provided feedback to management, as appropriate
- Participated in Investment Operations on-site visit (week of 3/12) along with FCU and ORM and performed walkthroughs of management testing (e.g. Cash/Asset Recons, SMF, Pricing, Corporate Actions)
- Reviewed Investment Accounting CW to PAM 12/31 “Proof of Concept” Memo and reconciliation support
- Reviewed 12/31 RML Reconciliation including tie-out to 4Q'17 Financials as well as legal entity structure related to RMLs