

Report of the Section 151 Officer

Local Pension Board – 28 March 2019

Internal Controls Reports

Purpose:	To inform Local Pension Board of reportable items contained within the internal controls reports of appointed fund managers
Consultation:	Legal, Finance and Access to Services.
Report Author:	Jeffrey Dong
Finance Officer:	Jeffrey Dong
Legal Officer:	S Williams
Access to Services Officer:	N/A
For Information	

1 Background

- 1.1 The internal control and governance framework in which a business operates comprises the systems, work processes and culture and values by which the business directs and controls its business to provide comfort to its customers, clients and shareholders.
- 1.2 Asset managers and custodians are subject to heavy regulation from a global, EU and UK context. They are required to report on their systems of internal control which are subject to external audit and comment by suitably qualified and independent audit companies.
- 1.3 The summary of exceptions for the last calendar year is attached at Appendix 1 for the City & County of Swansea's appointed fund managers and custodian.

It is noted that the exceptions have been addressed appropriately by management and are recognised as such with appropriate remedial action being undertaken. The exceptions highlighted are taken seriously but do not pose direct concern for the businesses concerned or the assets under management.

2 Legal Implications

- 2.1 There are no legal implications arising from this report

3 Financial Implications

- 3.1 There are no financial implications arising from this report

4 Equality and Engagement Implications

4.1 There are no equality and engagement implications arising from this report

Background Papers: None.

Appendices: Appendix 1 – Fund Manager Summary of Internal Control Reports – 2017.

Fund Manager Summary of Internal Control Reports – 2017

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Blackrock – Report of Controls at Blackrock Placed in Operation and Test of Operating Effectiveness for Asset Management Services, 1st October 2016 to 31st October 2017

Control Procedure	Test Performed	Exception Noted	Management Response
<p>APG and Technology staff use centrally managed solutions to schedule and automate the execution of batch jobs. Access to change batch job schedules is restricted to authorized personnel.</p>	<p>On multiple occasions during the examination period, observed the batch job scheduling systems to ascertain that automated tools were used to schedule and manage batch jobs.</p>	<p>For the GLM job scheduler, a configuration change was made which resulted in the potential for unauthorized users to access the internal job scheduling tool. Upon identification, management updated the configuration to restrict access to authorized employees.</p>	<p>Management updated the GLM job scheduler configuration to restrict access to authorized employees. Additionally, management confirmed that unauthorized changes to batch job schedules would be identified as a result of Securities Lending operational control activities which rely upon batch processing in the GLM application.</p>
<p>Enterprise, application and underlying database user accounts follow established authentication standards regarding password complexity, length and change frequency.</p>	<p>Inspected enterprise and application password parameters for all in-scope systems and a sample of databases and servers to ascertain that they were configured to follow the security standards defined within BlackRock's Authentication Standard for password complexity, length and change frequency.</p>	<p>For 2 of 71 individuals across transfers and terminations selected for testing, noted the transfer notification was not sent timely.</p>	<p>Management has re-emphasized the importance of accurate notification for modification of access for transferred employees in accordance with policy. Additionally, management noted that one of the two late notifications identified was the result of a data feed error between the HR system of record and downstream corporate groups. Management performed a review and confirmed that this data feed issue was an isolated event, and has implemented an exception report to identify any similar issues that may occur in the future.</p>
<p>Upon notification of transfer, personnel access is modified, if necessary, in accordance with policy.</p>	<p>For a selection of transferred employees during the examination period, inspected relevant access requests, ticket and logs associated with the transfer to ascertain that access was updated in accordance with policy.</p>	<p>For 2 of 45 transfers selected for testing, noted the user access was not updated on a timely basis per BlackRock policy.</p>	<p>Management has re-emphasized the importance of timely modification of access for transferred employees in accordance with policy.</p>

Blackrock Cont'd

Control Procedure	Test Performed	Exception Noted	Management Response
<p>The ability to modify system security parameters or to perform user administration functions is granted only to administrators and operations personnel whose job functions require such access.</p>	<p>For a selection of users with the ability to modify system security parameters or perform user administration functions, inspected documentation and Company departments within the Human Resources listing, and inquired with process owners to ascertain that access was authorised and consistent with job responsibilities.</p>	<p>For 1 of 45 servers and databases selected for testing, D&T noted 7 of 234 users with administrative access whose access was no longer authorized. Upon investigation, noted these 7 users did not log in past the date where access was no longer authorised.</p>	<p>Management has confirmed that these 7 accounts had previously been deactivated, and access was reinstated due to a software bug with a disaster recovery failover process which was limited to one in-scope database. Exposure checks were performed to confirm that no activity was undertaken as part of re-instatement, and process improvements have been taken to avoid similar instances in the future. In addition, periodic re-certifications are in place to ensure that database access is reviewed and updated according to policy; this issue arose in between re-certifications.</p>

Aberdeen Asset Management Ltd – Internal Controls Report for the period ended 30th June 2017

Control Procedures	Test Performed	Exception Noted	Management Response
<p>On a daily basis, the Trade Support team confirm with State Street the deal ticket number of the last trade of the day to confirm that all deals placed have been automatically sent to State Street's Enterprise system. The deal ticket number is noted on the teams' end of day checklist, which is signed off as reviewed by a second member of the Trade Support team.</p>	<p>For a sample of days, inspected the end of day checklist to confirm that the last ticket number of the day was confirmed with State Street and that the checklist was reviewed and signed off by a second member of the Trade Support team.</p>	<p>For one of 30 days in our sample, the checklist confirming the last deal ticket number of the day was not signed off by a second member of the Trade Support team to evidence review.</p>	<p>Whilst the checklist was not signed as reviewed no transaction specific tasks or controls were missed. Client assets or transactions were not at risk and no client losses were sustained. The team have been reminded of the importance of obtaining manager sign-off after completion of the control.</p>
<p>The Data team updates the property details on the accounting system for each purchase or sale in a timely manner. These updates are subject to a secondary review for completeness and accuracy as and when required.</p>	<p>For a sample of purchases and sales made during the period, inspected evidence to confirm that updates were processed in a timely manner and were subject to a secondary review for completeness and accuracy.</p>	<p>For 8 of 10 updates to purchases and sales data in our sample, the secondary review to ensure the completeness and accuracy of data inputs did not occur.</p>	<p>Management acknowledge the absent secondary data entry checks in relation to purchase and sale events. However it should be noted that the independence of Fund Accounting entries to the Horizon system and AAM Property Data team entries acts as a solid third accuracy check on purchases and sales data. We are therefore comfortable that this gives robust reliability to this information to eliminate error or client impact.</p>

Aberdeen Asset Management Ltd cont'd

Control Procedures	Test Performed	Exception Noted	Management Response
<p>Security prices which are stale, unquoted, fair valued, in liquidation, suspended or written down are sent to Fund Managers and Dealers for review and sign-off on a monthly basis.</p>	<p>For a sample of months, inspected the evidence to confirm the review and sign-off of stale and unquoted prices by the Fund Manager or Dealer.</p>	<p>For the full sample of four months in our sample, the monthly signoffs for security prices which are stale, unquoted, fair valued, in liquidation, suspended or written down, had incomplete sign-offs from a limited number of Fund Managers and Dealers.</p>	<p>Management acknowledge this exception but note that these prices were subsequently reviewed by the Pricing Committee with no further amendment. There have been more stringent controls around this process imposed in the last year regarding follow ups with Fund Managers and escalations to Senior Management. This has resulted in a decrease in the number of Fund Managers failing to sign-off on a monthly basis. Whilst the report notes a limited number of missing sign-offs, statistics on exceptions are produced by Operations and reviewed at the Group Pricing Committee each month. This is monitored at Group level in the Conduct MI report which aims to ensure the fair treatment of customers is central to the corporate culture. The monitoring ensures we are tracking measures for automation and process improvement.</p>

Aberdeen Asset Management Ltd cont'd

Control Procedures	Test Performed	Exceptions Noted	Management Response
<p>User ID and system access (including network, application and remote access) of terminated employees are disabled in a timely manner by the IT Support team upon receipt of notification from HR.</p>	<p>For all leavers during the period, inspected network and application user lists to confirm that user access has been revoked in a timely manner.</p>	<p>For 12 of the full population of 680 leavers in the period, network access was not disabled or deleted in a timely manner.</p>	<p>Management acknowledge this exception which has been discussed between IT and HR. A monthly reconciliation of terminated users will be conducted to ensure system access has been removed. For the exception noted the users had not accessed their account and no clients were impacted as a result.</p>
<p>Every 90 days a report of network accounts inactive for 180 days is reviewed and all users deemed to have no valid reason for an account are disabled.</p>	<p>Inspected a sample of reports of inactive network accounts and confirmed that all accounts inactive for 180 days were reviewed and disabled where no longer required.</p>	<p>For one of 25 inactive network user accounts in our sample, the account was not assigned an owner for review and was therefore not disabled.</p>	<p>It is recognised that as a result of human error one inactive account was not disabled. Staff have been reminded of the importance of the accuracy of this review. For the exception noted the user did not access their account and no clients were impacted as a result.</p>

Goldman Sachs – Report on Goldman Sachs Asset Management’s Description of its Investment Management System and on the Suitability of the Design and Operating Effectiveness of Controls – 1st October 2016 through 30th September 2017.

Control Procedures	Test Performed	Exceptions Noted	Management Response
<p>For trades that are manually input into the trade management and portfolio accounting systems by Trade Management, the trade details booked into each system are reviewed and approved by a second individual to ensure completeness and accuracy of the booking.</p>	<p>For a selection of trades manually booked into the trade management and portfolio accounts system, inspected evidence to determine whether the trade was reviewed and approved by a second individual.</p>	<p>For one of 25 sampled manually booked trades, there was no evidence of a secondary review.</p>	<p>The manual trade booking exception occurred due to a failure to evidence the secondary trade review in accordance with agreed procedures of documenting the process using a centralised check list. Following this occurrence, the team has implemented practices which will ensure each review is documented on the checklist. Trade Management has reinforced these control processes and procedures with all members of the global Trade Management Team.</p>
<p>On a daily basis Operations reviews the Cashflow workflow to ensure that each cash contribution and withdrawal request was completed.</p>	<p>For a sample of days, inspected the reviews of the regular and client-directed cash flows to test whether the reviews were completed within the day the workflow was initiated.</p>	<p>For one of 25 sampled end of day Cashflow reviews, the review was not completed in a timely manner</p>	<p>The exception regarding the supervision of the Cashflow workflow occurred due to a failure to evidence that the supervisory end-of-day check was completed for the sample test date. All client cash contribution and withdrawal requests were processed in accordance with existing procedures. PwC tested the secondary review of Cashflow authorisation and accuracy without exception. The Client Management Team implemented an additional supervisory control to ensure completeness of all Cashflow requests. Best practices have been reviewed with regional managers to ensure adherence to updated procedures.</p>

Goldman Sachs Cont'd

Control Procedures	Test Performed	Exceptions Noted	Management Response
<p>Individuals whose roles and responsibilities to applications have changed as a result of a transfer event have their access privileges reviewed in a timely manner by appropriate personnel.</p> <p>Access is reapproved or revoked for individuals who no longer require access based on their new job functions.</p>	<p>For a sample of access entitlements associated with application transfer events, inspected evidence to determine whether the application access entitlements were reviewed by appropriate personnel and reapproved or revoked in a timely manner.</p>	<p>For a sample of 25 entitlements identified for removal as a result of a transfer event, only one entitlement was not removed timely.</p> <p>For 9,747 entitlements identified as transfer events during the period 1 October 2016 to 30 September 2017.</p> <ul style="list-style-type: none"> - 54 entitlements were not removed. - 99 entitlements were not removed timely. 	<p>One access entitlement from a mainframe-based vendor application was not removed in a timely fashion upon the transfer of one user. This has been attributed to human error.</p> <p>Following detection of the above missed event, a full analysis of all transfer events demonstrated that 9,747 entitlements were identified as transfer events during the period. Of the 9,747 entitlements identified, 5,808 entitlements were identified for removal. 97.37% of entitlements identified for removal on time.</p>
<p>Physical access privileges to the data centres are re-certified on a periodic basis to ensure access is commensurate with the individual's current job role. Access is reapproved or revoked in a timely manner.</p>	<p>For each data centre, inspected evidence to determine whether a periodic access privilege recertification was performed.</p> <p>For a sample of physical access privileges requested to be revoked as a result of the periodic recertification, inspected evidence to determine whether the physical access privileges were revoked in a timely manner.</p>	<p>For the population of 1,099 data centre access privileges that were part of Q3 data centre recertification, one data centre access privilege, while presented for recertification, was not certified.</p> <p>No exceptions noted in the revocation of access.</p>	<p>During the Q3 2017 data centre physical access recertification, a single physical access code for one person was not recertified. This was attributed to human error.</p> <p>Upon identification of this recertification exemption, the mentioned access has subsequently been removed.</p> <p>Management has implemented additional controls to ensure all access privileges subject to the recertification receive a decision in line with the recertification timeframe.</p>

HarbourVest Partners LLC – Private Equity Fund Administration Report on Controls Placed in Operation and Tests of Operating Effectiveness – January 14, 2017 to September 30, 2017

Control Procedures	Test Performed	Exceptions Noted	Management Response
<p>The Vice President of Global Infrastructure authorises access to the Data Centre via an Access Modification email.</p> <p>The Vice President of Global Infrastructure instructs the Data Centre via Access Modification email, in a timely manner, to revoke terminated employees access.</p>	<p>For a sample of employees with access to the Data Centre, inspected the corresponding Access Modification emails to determine whether key card access was authorised.</p> <p>For a sample of terminated employees with access to the Data Centre, inspected the corresponding Access Modification emails to determine whether the Vice President sent an Access Modification email to the Data Centre in a timely manner.</p>	<p>From the total of 2 users who were granted access to the Data Centre during the period and selected for testing, one was not authorised to access HarbourVest cage. A review of the user’s access information indicated the user was not a HarbourVest employee. It was ascertained that the access was granted in error by the Data Centre’s access management team. On inspection it was determined that the user had not accessed the cage since it was established.</p>	<p>Management implemented a monthly monitoring control, whereby the VP of Global Infrastructure obtains and reviews a monthly email reporting access from the Data Group. After review, an email is sent to the Internal IT team attesting to access accuracy.</p>
<p>Access to applications, data and supporting infrastructure is disabled or removed upon notification from HR personnel in a timely manner.</p>	<p>For a sample of terminated employees, contractors and vendors, inspected user listings to determine whether access was either disabled or removed from applications, databases and operating systems upon notification from HR personnel in a timely manner.</p>	<p>For 5 users selected for access termination testing, evidence of timely network access termination was not available for 1 user. At the time the sample was selected, the one user’s account was shown as removed from the network and other systems.</p>	<p>The users departure tasks were processed in the acceptable timeframe per our departure procedure during that time period. At that time, we did not document when the user account was actually disabled, but have since changed our process to include this information.</p>
<p>IT personnel are automatically notified of backup failures and appropriate action is taken for resolution and/or backups are rerun.</p>	<p>For a sample of backup failures, inspected documentation to determine whether backup failures were reviewed and appropriate action was taken for resolution and/or backups are rerun.</p>	<p>Inspected system generated population of the backup failures along with the query and noted no backup failures for the period covered by this report.</p>	<p>N/A</p>

Invesco – Report on Invesco Asset Management Ltd, Description of their Investment Management Services and on the Suitability of the Design and Operating Effectiveness of Controls for the Period 1 October 2016 to 30 September 2017

Control Procedures	Test Performed	Exceptions Noted	Management Response
<p>FX trade amendments in SS&C are prepared by a Global Portfolio Services (GPS) Treasury Support Administrator by cancelling the original and rebooking the new FX trade into SS&C. The amendments are independently reviewed on a daily basis by a GPS Treasury Support team member. The amended FX trade will then flow to Global Trading Support Services (GTSS) and once matched, an automated confirmation will be sent to the relevant custodian to instruct settlement.</p>	<p>For a sample of days, confirmed that the trade amendments were independently reviewed by a GPS Treasury Support team member.</p>	<p>For 1 out of a sample of 20 days selected for testing there was no evidence of independent review performed by a GPS team member.</p>	<p>In the instance noted during the testing, the evidence of review was not successfully archived and retained. By virtue of the wider control framework in place, we are comfortable that the FX trade amendments in SS&C for that particular day were appropriately reviewed by a GPS Treasury Support team member, and it is only the archived evidence of the daily FX trade pack that was missing. The daily cash reconciliations control is the key control that complements the process and identifies any exceptions from the cancel and rebooking process. Additional preventative measures have been implemented leading to the archiving of the daily FX trade packs being split into smaller files, and subsequently checked to ensure all information is successfully archived.</p>

JP Morgan Asset Management – Report on JP Morgan Asset Management’s Description of its Investment Management Services System and on the Suitability of the Design and Operating Effectiveness of its Controls. 1 January 2017 – 31 December 2017

Control Procedures	Test Performed	Exceptions Noted	Management Response
<p>Information Technology – Change Management: Controls provide reasonable assurance that new system developments and changes to existing systems are documented, tested, approved and implemented by authorised personnel.</p>	<p>Non-emergency code promotions executed using the ITPAM and AIM code promotion tools are subject to automated validations to ensure all promotions have a fully approved ITSM record and that the record ties to the change that was promoted. Emergency code promotions executed using the ITPAM and AIM code promotion tools are manually reviewed to ensure each promotion has a fully approved ITSM record and that the record ties to the change that was promoted.</p>	<p>For the period 1 January 2017 to 1 August 2017, 12 AIM emergency changes had not been captured within the AIM manual review report maintained by management to monitor approval status of emergency changes made using the AIM code promotion tool. Two of the 12 changes identified were applied to systems within the scope of this report.</p>	<p>Management performed a retrospective review of all 12 AIM emergency changes and confirmed that relevant changes had a fully authorized ITSM change record - this is tested in control 13E. To prevent recurrence, an enhancement was implemented in October 2017, which automatically creates a draft ticket to capture appropriate post-deployment authorization. This automation, coupled with daily monitoring of AIM emergency change reports ensures ITSM records have been approved.</p>
<p>Information Technology – Access Management: Controls provide reasonable assurance that access to systems is limited to authorised individuals.</p>	<p>Access to systems is granted only upon approval by authorised management or a designee. The approver confirms access is commensurate with the users' job responsibilities.</p>	<p>Investment Guidelines Compliance application: For the period 1 January 2017 to 10 February 2017, one (1) new user was provided access to the LENS application without documented approvals in place. 5 users who previously had read-only access to the legacy LMA application were further provided with edit access to the LENS application. This issue was identified and reported in the JPMAM report for the year ending 31 December 2016.</p>	<p>The LENS application was implemented on November 14th 2016, providing a replacement interface to manage counterparty reference data for FX and time deposit transactions only. The one (1) user was a technologist who was required to support implementation. 5 users were existing users of LMA that were provided with edit access as read-only access was not available. This exception was identified during 2016 testing and closed in February 2017; the</p>

JP Morgan Asset Management cont'd

Control Procedures	Test Performed	Exceptions Noted	Management Response
			<p>application was on boarded to the IDCert recertification tool and a full recertification of all entitlements run to ensure only appropriate individuals had access to the application. LENS is now part of periodic recertification cycles. No inappropriate activity was discovered as result of the exception identified.</p>
<p>Information Technology – Access Management: Controls provide reasonable assurance that access to systems is limited to authorised individuals.</p>	<p>Access to systems (including user access administration capabilities) is re-certified by appropriate management at regular intervals as defined by policy guidelines. The approver confirms access remains commensurate with the individuals' job responsibilities or requests changes/revocation to access.</p>	<p>In reviewing the recertification of access to 13 in-scope UK databases with a total population of 2,721 database accounts, access permissions for 74 system accounts had not been recertified by appropriate management.</p>	<p>Although the functional IDs associated with the system accounts are not intended for direct human access they are still included in the recertification process but were not assigned to the appropriate reviewer due to an incorrect mapping following migration to a new request system. Management confirmed all highlighted accounts were part of a broad remediation and had monitoring controls in place which would flag human access of these functional accounts to support review and investigation. To avoid recurrence, an enhancement has been raised to ensure any accounts missing an owner are identified and assigned as a prerequisite to recertification.</p>

First State Investments – ISAE 3402 Assurance Report on Internal Controls for the Period 1 July 2016 30 July 2017

Control Procedures	Test Performed	Exceptions Noted	Management Response
		There are no exceptions identified within this report	

EnTrustPermal & HSBC Security Services – Report on HSBC Security Services in Ireland’s Description of its Fund, Custody and Transfer Agency Services System and on the Suitability of the Design and Operating Effectiveness of Controls for the period 1 January 2017 – 30 September 2017

Control Procedures	Test Performed	Exceptions Noted	Management Response
<p>Periodic disaster recovery testing is performed to ensure services can be recovered within a defined maximum disruption time.</p>	<p>Inspected the resilience statement and the server resilience test case results to determine whether the documented level of resilience is achieved as defined by the application policy.</p>	<p>Disaster recovery testing was not performed in accordance with the frequency defined by policy for the following time periods and applications:</p> <p>The disaster recovery test performed for HSBCnet was not completed successfully and not resolved within the period.</p>	<p>Management acknowledge that Business Objects (both HK and Pensions utilising shared infrastructure) and HSS Ai4 were unable to complete a disaster recovery test within the frequency defined within the HSBC IT Service Resilience Standard. Management have now successfully completed tests of these applications and confirm that no incidents occurred during the period that required implementation of the disaster recovery environment.</p>
<p>Requests for removals to data centres are actioned by the IT security team.</p>	<p>For a sample of access revocations, inspected the GSR ticket or email to determine whether the request was actioned.</p>	<p>For 2 out of 61 revoke requests sampled at the Tseung Kwan O data centre, access was not removed.</p>	<p>Management acknowledge that 2 access revoke requests for the Hong Kong TKO Data Centre were not completed in a timely manner. This was due to an administration error resulting from the large number of revocations being processed by the team responsible. Management now complete a sample check of revoke requests processed to validate individual operators are completing the requests correctly. Additionally, management are reviewing options for a fully automated system to avoid the requirement of manual intervention.</p>

Partners Group – Report on the Internal Controls, Holdings AG as of 31 December 2017

Control Procedures	Test Performed	Exceptions Noted	Management Response
		There are no exceptions identified within this report	

Schroders Investment Management Ltd – Internal Controls Report 2017 ISAE 3402/AAF 01/06

Control Procedures	Test Performed	Exceptions Noted	Management Response
<p>For new and existing clients who wish to start trading derivatives, a checklist detailing all tasks required for the client take-on/change process is completed and signed off prior to the commencement of investment activity. This sign off can be physical or electronic. This includes checking whether clients have an active Legal Entity Identifier (LEI), obtaining the LEI and ensuring it is uploaded into the relevant systems for reporting to the trade repository.</p>	<p>For a sample of new and existing clients who wish to start trading derivatives, inspected checklists for client take-on/change process to confirm they had been completed and signed off prior to the commencement of investment activity, and that LEIs had been uploaded into the relevant systems.</p>	<p>For 1 out of 10 clients tested, one of the checklists was not completed (the LEI was not uploaded onto the trade repository) prior to the investment activity.</p>	<p>One LEI relating to a SIM client was not uploaded to the Trade Repository by the required date (T+1). The error was identified by Schroders' detective control on T+1. The LEI was uploaded and the trade was reported on T+3 into the Trade Repository. The relevant client was notified. The process has now been improved through the addition of a manual preventative control, so that LEIs are set up at the Trade Repository before trades are executed.</p>