Market Operator Compliance report 2022/23

Market Operator Services Limited
May 2023

FINAL

pwc

Executive summary

Background, scope and objectives

Background

As Market Operator, MOSL requires an independent review of the effectiveness of their response to their key compliance obligations as set out in the Market Code documents, which includes the governance and compliance arrangements, risk and impact assessment, process and controls operated by MOSL.

To govern its compliance obligations, MOSL will categorise the obligations contained within the Market Code documents into the core processes (or 'services') in which they are managed. These processes will be risk scored according to the impact on the market, taking into account the levels of complexity and automation involved. This will allow MOSL to produce a prioritised ranking of processes subject to review.

The calculation and allocation of settlement is one of MOSL's key compliance obligations given settlement's criticality to the effective operation of the market. You therefore require an independent review of the effectiveness of the processes, systems and controls you operate to ensure settlement is calculated in accordance with the Market Code documents.

In 2022/23, MOSL has planned to deliver Internal Audits that cover six key areas of the Compliance Framework and four end-to-end audits. Our review has therefore considered the completion and effectiveness of the Internal Audit within the Compliance Framework. The work focused on two areas: the Compliance Framework; and Settlements and the Assurance Framework.

The scope of our work included the following activities:

Settlements

a) Review of Internal Audit work for Settlement process:

- An evaluation of the Internal Audit methodology, work and outcomes for the Settlement process Internal Audit, informed by a review of key documents, working papers, and meetings with Internal Audit staff. As part of the work, we have evaluated the testing results and the appropriateness of the outcomes and conclusions;
- We considered the effectiveness and efficiency of the audit process and the follow-up / action tracking undertaken to address findings and mitigate risk identified during the Internal Audit work; and
- We conducted a gap analysis of the as is / to be processes against code obligations and good practice to highlight gaps and provide recommendations.

b) Review of change management controls for CMOS

- We have reviewed the governance of the CMOS change management process and management considerations for the ITGC (IT General Controls) for the CMOS system.
- We also considered any relevant certifications for CGI evidencing the implementation of ITGC and considered the level of assurance it gives to MOSL on the adequate operation of the key controls.
- We have reviewed the relevant policy and procedure documentation for change management. We have also undertaken a sample test of CMOS changes implemented in 2022/23 to consider the design and effectiveness of the established controls in place to prevent unauthorised or untested changes to the CMOS system. Our work included a review of evidence for access to the CMOS Settlement code maintained by CGI during the period under review, 1 April 2022 to 31 March 2023.
- We considered the controls implemented by CGI to protect the integrity of the CMOS code, such as the segregation of duties and DevOps system controls over change management for the CMOS code.

Assurance Framework

- We have undertaken an independent evaluation of the Internal Audit methodology, the work and the outcomes for the Internal Audits undertaken by the MOSL in-house Internal Audit team;
- We have considered whether the scope of the Internal Audit work was consistent with the WRC and MAC over the in-scope areas as well as the operating and design effectiveness of the MOSL processes and controls;
- Our work was informed by a review of key documents, working papers, and meetings with Internal Audit staff. As part of the work, we evaluated the testing results and the appropriateness of the outcomes and conclusions; and
- We also considered the effectiveness and efficiency of the audit process and the follow-up / action tracking undertaken to address findings and mitigate risk identified during the Internal Audit work.

Executive summary

Overview of our results

Results from our review of Internal Audit papers

This is the first year of Internal Audit undertaking reviews across the Assurance Framework. The Internal Audit plan for 2022/23 was presented to the Audit and Risk Committee in September 2022, and the Internal Audit work has started following the approval of the plan. We noted that the plan covered the period between September 2022 and September 2023, with the following reviews delivered in the period up to March 2023:

1	Settlements	2	MO Invoicing	3	Market Improvements Fund
4	Bi-laterals Programme Assurance	5	Reporting MPS		

Our review focussed solely on the areas in scope, and as a result did not cover other MO compliance processes within MOSL's risk and control framework. As a result, there could be gaps in MOSL's compliance which have not been identified from our review.

We have reviewed all of the above reviews and identified seven findings, two of which we categorised as **Medium priority:**

- **There is currently no underpinning methodology for the Internal Audit work.** While we have not observed any issues with the quality or scope of the Internal Audit work we reviewed, we did note that the current lack of work methodology may lead to inconsistencies and lack of efficiency in the delivery of the Internal Audit work itself.
- **The current basis for report opinions and individual finding risk ratings are not clearly articulated in the audit reports**. From our work it is clear that the risk ratings attached to the findings are considered in line with the MOSL risk management methodology. However, this is currently not articulated in the report. The articulation of the basis for the risk ratings and the overall report audit opinion forms part of the Internal Audit methodology (see point above) and therefore inclusion of this information as an appendix to the reports would enhance the transparency over the rationale for both the findings ratings and the report overall opinion. It would also support future development of Internal Audit opinion over the compliance with the Code, impact on the organisational risk management and system of internal controls.

We also noted further **two low priority** findings where improvements can be made to the Internal Audit review process as the documentation of the audit work, use of Risk and Control Matrices (RCM) as basis for controls testing, and ensuring consistency of information across key audit documents.

There were also **three advisory findings** where consistency or best practice could be implemented across reviews. This would ensure clearer and more consistent reporting, along with improving the quality of information included within reports.

Detailed observations follow on **page 3** of this report, with a definition of priority ratings in *Appendix 1*.

Results from our review of the CMOS change management process

We noted that the CMOS supplier CGI holds ISO 9001:2015 and ISO 27001:2013 certificates that are in date. We also noted that the ISO 27001:2013 certificate was re-assessed in 2022 and covers (among others) clauses for change management, system change procedures, logs, secure development environment and system acceptance testing.

We reviewed evidence that the Settlements code was transferred to CGI in 2020 and is stored in DevOps platform code repository. The DevOps platform enables an audit trail to changes to codes, but the available evidence shows the Settlement code has not been amended since it was transferred to CGI in 2020. We have also confirmed with CGI that any changes to the code would still have to be brought in production and would be therefore subject to the change management process that requires involvement of MOSL and go / no-go approval stages before any change to CMOS is implemented.

We have undertaken a sample test of changes to the CMOS system that were implemented in the CMOS 13.0 update in December 2022. We noted no exceptions from that review.

Follow-up update

In 2021/22, we have raised a High Risk finding regarding the slow progress in the Control Framework evolution. We considered our findings from the Internal Audit reviews undertaken in the current year and noted that there is sufficient evidence of progress; and the maturation of the Compliance Framework will be now monitored via the Internal Audit going forward, both through the audit plan and the follow-up process. We therefore regard this finding as closed.

Summary of observations

#	Area	Observation	Priority	Impact	Action/recommendation	Management response
1	Settlements MO Invoicing MPS Reporting Market Improvement Fund	**No formal methodology is in place underpinning the Internal Audit work.** When reviewing four out of five Internal Audit reviews, we noted that the delivered work was not underpinned by a defined methodology that would be utilised across all reviews performed. Furthermore, we noted that the Bi-laterals work was delivered as a project-assurance type engagement and therefore a different approach was taken when compared to a standard Internal Audit. A defined methodology ensures both consistency of work delivered by the Internal Audit team, as well as efficiency in the manner in which individual reviews are performed. For example, during our review of the Internal Audit papers we observed that the team has undertaken sample testing to draw conclusions upon, but there are no defined guidelines on determining sample sizes that the auditors should follow. This means that the auditors determine their approach on each review; this can lead to an inefficient approach whereby they would test more samples than would be expected under a defined methodology (i.e. 7 out of 9 sample months). We also reviewed the working papers and noted that the documentation of the sample testing is not using a standardised template and included within the working paper. This can make it difficult to track the outcomes of the sample testing.	Medium	Without a defined methodology which is applied across all audits there is the risk of inconsistency and inefficiency across the reviews performed. This could lead to trends being missed across the business and potential fixes and improvements not being identified and implemented.	**Action** Design and implement a methodology to be used across all reviews, including guidelines to be used when drafting statements of work and guidelines to be used during testing, including a sample testing matrix and template for sample testing to be documented. This should all be documented within the working paper so that there is one document that can be referenced back to with all the testing performed.	This is the first year of implementing our Internal Audit function so we welcome recommendations for potential improvement. Although we will be developing a more standardised methodology, we ensured that all the audit activities during the year followed a well-developed audit plan for each engagement which included the engagement objectives, scope, time and overall risk and code obligations relevant to the activities. All audit engagements were supervised and results were communicated with closed-off meetings with auditees. As these were our first audits we opted for relatively larger sample sizes, in a cautious approach, but acknowledge the need for a more standardised sample methodology going forward, which will be included within our overall methodology. A system for monitoring progress is in place to follow up progress and monitor management actions for effective implementation. Notwithstanding the above the recommendation is noted for implementation.

Summary of observations

#	Area	Observation	Priority	Impact	Action/recommendation	Management response
2	Settlements MO Invoicing MPS Reporting Market Improvement Fund	**The basis for the audit opinion and individual ratings is not clearly articulated in the report. The impact of the findings on the compliance with the Codes could be more clearly articulated, and consideration should be given on development of an annual audit opinion on compliance with the Code.** Whilst the Internal Audit reports provide an overview of the results and the audit opinion, there is lack of information for the basis of the classification, which is the detail of individual finding ratings and the impact it has on the operational or financial performance, breaches in laws and regulations or impact on reputation of the organisation. These are usually included as an appendix to the main report body, and also include the risk matrix underpinning the overall report opinion. The reports include information on the compliance with the WRC / MAC, but this information is frequently absorbed in the text rather than displayed more prominently in the test, and so the impact of the findings on the Code compliance can be difficult to evaluate. The Internal Audit team may wish to consider a one-page summary that highlights the overall report opinion and it's impact on the annual opinion over categories such as Code Compliance, Risk Management and Internal Controls. It is also regarded as a good practice to include the agreed statement of work in an appendix to the report, thereby giving the reader a background to the detail to the work performed.	Medium	Without a clear methodology for articulation of the findings ratings and the audit opinion, the Internal Audit team may be inconsistent in how these are applied across different reviews. Also, if in the future the Internal Audit team decide to develop and implement an annual opinion, then such a methodology will support in this area.	Include the basis for risk ratings for individual findings and the audit opinion as an appendix to the report template. Review the report template to bring out more clearly the audit opinion and the impact on the Code compliance, with a consideration given on future annual audit opinion to be implemented.	The audit opinion and the codes to which the audit relates are covered within the individual reports but we note the recommendation that the basis for the opinion and ratings can be clearer. The risk rating basis for the audit opinion is documented in the risk assessment methodology framework and for the purpose of the Audit & Risk Committee, there is a one-pager summary of the audit report that highlights the overall opinion with its impact to the code obligations and risk management prepared for them. However, going forward, we shall ensure that future audit report captures all the relevant areas as suggested. Consideration of an annual audit opinion will also be given with a methodology underpinning how this would be made.

Summary of observations (cont'd)

#	Area	Observation	Priority	Impact	Action/recommendation	Management response
3	Settlements / MO Invoicing MPS Reporting Market Improvement Fund	**Documentation of Walkthroughs** The method of documenting walkthroughs is currently undertaken as part of the working paper, as a table within a word document. This makes the process and controls hard to follow, it would benefit from being documented with an RCM template. This will allow the team to review the process in a simple format and will provide a basis for any future reviews as the process will be documented in an easily reviewable form. We understand that the Internal Audit team requests RCMs for the reviewed process as part of the information request, but currently the RCM is not used as basis for the controls testing.	Low	With the walkthroughs being documented within a word document it makes it hard to follow what processes have been reviewed and the review actions of controls taken.	**Recommendation** Consider incorporation of the RCM as the key testing document as part of the methodology review. Ensure walkthroughs are performed and documented within an RCM in excel, which includes columns for the process, process owner, controls, etc.	Noted. RCM's have been set up as excel spreadsheets and only one of the audit activities had not used this. We will ensure consistency and note the benefits in having this document as part of the key testing document.
4	Settlements / MO Invoicing MPS Reporting Market Improvement Fund	**Responsible persons and due date** In the final reports the findings do not include information on the responsible persons or due dates for actions defined as part of the report. We reviewed the actions tracker which included these details so we were comfortable that there was accountability for these actions, however they should be detailed within the published report.	Low	Without the due dates and responsible officers included in the report, the Audit Committee may be unclear on the timelines for the agreed actions.	**Recommendation** Include within the report a section for responsible persons and due date for remediation of all findings noted.	We currently record all actions, with timelines and responsibility within an Internal Audit Action Log which we find is the most effect way for our team to manage the actions. Recommendation is noted.
5	Settlements	**Inconsistencies between review documents** It was noted for the Settlements Audit that the audit scope and period in the working paper did not match those from the Letter of Engagement.	Advisory	Inconsistencies between review documents can lead to confusion as to what the objectives of the audit were and the period under audit.	**Recommendation** Ensure the audit scope and audit period is consistent across all review documents (i.e. Letter of Engagement, Working Paper, Final Report) and if there is a change in scope or audit period this is noted in the relevant documents.	This was as a result of the change of scope in the audit work following the initial engagement meeting which was not corrected in one of the documents. Noted.

Summary of observations (cont'd)

#	Area	Observation	Priority	Impact	Action/recommendation	Management response
5	Bi-laterals	**Unique actions references** We noted that across the bi-laterals reports the actions that had been closed were removed from the following reports and that generic numbers were used to identify findings (i.e. 1,2,3) and therefore when one finding was removed a different finding would become finding 1,2,3.	Advisory	N/A - Advisory	**Recommendation** Ensure all actions have unique reference numbers and are detailed within all reports, with their status noted next to them.	Noted
6	Bi-laterals	**Milestone reporting** The six-monthly reporting for this project was mandated by Ofwat as part of the project change approval. In practice, we have established that a report had to be prepared to meet the 6-month timeline, although the project was a month away from a significant milestone. If there were flexibility in the audit timeline, a greater value could be gained from completing the audit after the milestone date. We recognise that this as not possible for this particular project assurance review work due to external deadline mandated by Ofwat. However, if MOSL plans to undertaken project assurance-style reviews in future, consideration of significant milestones should be considered as part of the audit delivery timeline.	Advisory	N/A - Advisory	**Recommendation** During the scoping for future projects it should be suggested that reporting should be performed after defined milestones during the project.	We value this advisory note as we are undertaking internal audits of all of our improvement programmes this year.

Follow-up on 2021/22 findings

#	Area	2021-22 Observation	2021/22 Priority	Impact	Recommendation / Update	Management response
1	All	**Limited progress and evolution of MOSL's own Compliance Framework** For several years, MOSL has maintained its own Compliance Framework with the aim of serving as an overarching document, underpinning MOSL's compliance with the market codes. In the prior year, MOSL made progress in defining its strategy and timeline for completing the Framework, which was aimed for completion by the end of the 2021-2022 financial year; expanding the framework to cover a broader range of processes and identify key risks and controls associated with each of these. In the current year, progress made includes an expansion on existing as well as additional process documentation. This includes an expansion of the procedures followed and an initial identification of controls across a number of areas such as Settlement, Unplanned Settlement and MO Charging. However, not as much progress has been made as was originally planned. In the prior year, there were plans to expand MOSL's own monitoring of key controls and clearly map out all medium risk processes. Other than the progress set out above, this has not occurred in the current year. Finally, it was not always clear whether procedural documentation was classed as "final" or not, with sign off still pending for some documents	High	Without a mature Compliance Framework, there exists an increased risk of non-compliance with the MAC and the WRC. Finally, with a lack of clarity over whether procedural documentation was classed as "final" and / or signed off, there exists a risk associated with version control, and potentially process owners following procedures which does not align to the most up to date document.	**Recommendation** Complete procedural documentation across the remaining process areas in which MOSL is required to comply with the Market Codes. In relation to where procedural documentation is not been signed off or classed as "final", we recommend documentation to be finalised and subject to version control to ensure clarity and consistency of use. **Update** As part of our Internal Audit work review, we have established that the Compliance Framework risk assessment was used as a basis for the 2022/23 Internal Audit plan delivered by the newly established Internal Audit team. We have noted that that the Internal Audit team raised a number of recommendations regarding aspects of the compliance framework, such as completion of risk matrices and procedure notes completion. We therefore anticipate that the maturation of the Compliance Framework will be now monitored via the Internal Audit process going forward, both through the audit plan and the follow-up process, and therefore regard this finding as closed.	We were confident that the internal audit plan that we put in place would directly address this observation, and drive continuous improvement of the compliance framework from 21/22 so we are pleased to note and agree with the update from PwC.

A

Appendices

Appendix 2 – Definition of priority ratings

Definition of priority ratings

Our findings are categorised by the following priority ratings:

- **High** – An action relating to a significant issue identified that is resulting in (or could result in) non-compliance with the Wholesale Retail Code (WRC) and is important to be addressed by management or to be considered by the market (if impacts multiple parties) as a matter of priority;

- **Medium** – An action addressing a weakness which, although unlikely to lead to a material risk of non-compliance with the WRC, warrants timely action using the existing framework existing either locally or across the market to ensure a formal and effective system of control exists; and

- **Low** – An action which addresses issues where resolution within the normal management framework is considered desirable to improve efficiency or ensure that the business matches current market best practice; or observations relating to market wide scenarios that could be considered for improvement purposes.

- **Advisory** – An improvement recommendation to MOSL to consider going forwards to better manage their processes and reporting obligations. We will not seek to review progress made against any advisory recommendations we make, as it is for MOSL to review and consider next steps, and we consider there to be low impact on their obligations.

Thank you

pwc.com

RITM8224120