ARMS Ltd.
Follow-up to the 2011 Auditor General Report
‘ARMS Ltd. – Setting Up and Operations’
and ancillary topics

Report
by the
Auditor General

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Abbreviations

AG	Auditor General
AMM	Automatic Meter Management
ARMS Ltd.	Automated Revenue Management Services Limited
BPO	Business Process Outsourcing
BPR	Business Process Re-engineering
CRM	Customer Relationship Management
EMC	Enemalta Corporation
ERP	Enterprise Resource Planning
GCC	General Contracts Committee
HoR	House of Representatives
HR	Human Resources
IBM	International Business Machines
ICT	Information and Communication Technology
IUBS	Integrated Utility Business Systems
KPI	Key Performance Indicator
MRA	Malta Resources Authority
NAO	National Audit Office
PAC	Public Accounts Committee
PDA	Personal Digital Assistant
RfI	Request for Information
SA&I	Special Audits & Investigations
SCADA	Supervisory Control and Data Acquisition
SLA	Service Level Agreement
US	United States of America
WSC	Water Services Corporation

Executive Summary

This follow-up exercise was embarked upon by the Auditor General with three objectives in view: (1) to determine what/whether action has been taken by ARMS Ltd. following the Auditor General's original report on ARMS Ltd. setting up and operation; and to the Malta Resources Authority second technical review of ARMS Ltd. operations, both published in 2011; (2) to determine the status of smart meter deployment as at end May 2012; and (3) to investigate concerns arising in the media dealing with smart meter tampering.

This exercise was carried out in terms of Para 9(a) of the first schedule of the Auditor General and National Audit Office Act, 1997 and in accordance with generally accepted practices and guidelines applicable to the National Audit Office.

Findings are based on collected/analysed information, meetings held with pertinent officials, and desk-based research. The main tool utilised was a set of four themed, detailed questionnaires covering the three objectives of the exercise. Salient findings follow:

- ARMS Ltd. has improved debtor days since 2009 to date. EMC heavy consumers debtors have also reduced since ARMS Ltd. take-over of their responsibility. (Pages 11 and 16).
- Bills' reversals remains a concern for National Audit Office (NAO) at over 7 per cent of bills issued. (Page 11).
- ARMS Ltd. has reduced locked readings from over 50,000 in 2011 by 30,000. (Page 12).
- ARMS Ltd. has failed to implement its own set of Key Performance Indicators (KPIs) designed in 2009 and has also failed to heed NAO's related advice. (Page 12).
- The number of ARMS Ltd. portal users remains low. The absence of 'smart' connection somewhat handicaps portal functionality. ARMS Ltd. has not met self-set targets for online payments and the number of consumers making use of the direct debit facility is likewise deemed to be low. (Page 13).
- No Revenue Assurance Unit, critical in detecting meter fraud, has as yet been set up. (Page 13).
- Level of calls taken by the (call) centre has improved. However, abandoned calls have also increased. (Page 14).
- ARMS Ltd. continues to see no reason to heed NAO's recommendation to carry out statistical analysis of consumer data to enable precise identification of problems and setting of trends. NAO looks askance at this decision. (Page 12).
- Customer satisfaction has not been gauged since ARMS' move to the new premises. The move was partly justified to ensure better customer service. (Page 14).

- ARMS Ltd. has taken over application processing and handling duties for Enemalta Corporation (EMC), with the aim to improve the one-stop-shop approach to service. (Page 16).
- The Heads of Terms agreement signed by EMC, Water Services Corporation (WSC) and ARMS Ltd. is still missing the (critical) supporting Service Level Agreements (SLAs). (Page 16).
- Reliance on IBM by ARMS Ltd. for system support is high. The prevailing agreement expires in 2013 and no action has so far been taken to ensure service continuity. (Page 17).
- Shortcomings in meter readers' Personal Digital Assistants (PDAs) interface to the new system have been addressed. (Page 17).
- The go-live date for 'smart' connection has been postponed by twelve months. Should this not occur on time, the present regime of estimate/manual readings will prevail. (Page 17).
- Waiting and service time for consumers calling in person at ARMS Ltd. has reduced. (Page 18).
- EMC claims that various local media reports describing instances of meter tampering are untrue. Many of the adverts/articles on Internet are described as 'gimmicks'. (Page 19).
- While a small subset of (EMC) meters are susceptible to magnetic tampering, this gets recorded and can be discovered at a later stage when the meter is queried. (Page 19).
- EMC meters have built-in protections against tampering. (Page 19).
- EMC plans to reinforce its Revenue Protection Section need to be prioritised and coordinated with a similar initiative on the part of ARMS Ltd. (Page 20).
- Practical examples of meter tampering techniques submitted to EMC by NAO were proved to be ineffective, incompatible with the meters installed or to leave traces. (Page 20).
- Hardware obsolescence, for the expected lifetime of the meters, is covered contractually with the suppliers. (Page 20).

Overall, NAO is concerned with the go-live date. This has already experienced a one-year postponement and current status of meter installations lags behind projections. NAO is likewise concerned with the risks being assumed in adopting the big bang approach to go-live. By way of major recommendations, NAO (1) emphasises the need for EMC/WSC/ARMS Ltd. to prioritise efforts to set up/boost revenue protection units capable of detecting/investigating meter fraud; and (2) urges ARMS Ltd. to reconsider its decision not to carry out statistical analysis of consumer data.

In conclusion, NAO is reasonably assured, basing on the technical information supplied by EMC, that as long as the necessary steps to ensure a continuous function of 'detect and inspect' are taken, meter fraud will reduce through a combination of prevention and corrective techniques.

Introduction

In 2005, Enemalta Corporation (EMC) embarked on an Information and Communication Technology/Business Process Re-engineering (ICT/BPR) that was to involve a thorough overhaul of its business models. Water Services Corporation (WSC) was invited, and agreed to, participate in this exercise. Eventually a Request for Information (RfI) for an Integrated Utilities Business Systems (IUBS) was jointly issued in November 2005. The model opted for at the time was a strategic partnership whereby the chosen partner's capabilities would complement those of the Corporations; develop into a long-term business relationship; and be conducive to knowledge sharing.

The project itself covered four main themes: Enterprise Resource Planning (ERP) integrating internal and external management information; Customer Relationship Management (CRM) supporting the retail operations; Automatic Meter Management (AMM) allowing for the creation and maintenance of a database that would provide the necessary data for billing; and Supervisory Control and Data Acquisition (SCADA) providing EMC with remote monitoring and control of plant and equipment.

By the time the bid closed in April 2007, a single bidder was in the running - International Business Machines (IBM). After lengthy negotiations involving changes in scope of the tender, the General Contracts Committee (GCC) approved the award of the contract in June 2009. As part of the changes, it was decided to opt out of the Business Process Outsourcing (BPO) option whereby IBM would have been responsible for running operations for a number of years. As an alternative, both Corporations agreed to establish a separate company charged with the responsibility for customer care and billing on their behalf.

ARMS Ltd. was in fact set up in January 2009 with the principal objective of administering and managing the IUBS for the purpose of billing services. ARMS Ltd. main activities are to manage the implementation of a new meter reading, billing and collections (meter-to-cash) process and customer relationship management for both Corporations. ARMS Ltd. is also to provide internet-based client/consumer facilities, develop a one-stop-shop concept and manage smart meter roll out.

Two components of the IUBS project, Billing and CRM were commenced in 2009 with 'go-live' being set at 4 January 2010.

The system encountered immediate problems and in summer of 2010, public outcry was vociferous. Media coverage was also constant and negative. Complaints included errors in bills, inadequate customer serving facilities and irregular billing frequencies. The situation was exacerbated with the introduction of significantly higher utility tariffs introduced in January 2010.

In September 2010, the Parliamentary Opposition presented a motion calling for the Auditor General (AG) to investigate various related allegations. The Government side presented changes to the motion and in November 2010, the House of Representatives (HoR) resolved that the AG was to investigate the setting up and staffing of ARMS Ltd., reasons for consumer complaints regarding the service level offered by ARMS Ltd., and other related matters.

NAO's investigative report was tabled in November 2011. Salient findings therein included:

- the opting out of the BPO model originally requested;

- a lack of significant change to the meter reading process as at report date;
- incapability to manage locked accounts for which bills were not being issued;
- adoption of Key Performance Indicators (KPIs) that would have benefited from a revisit;
- lack of dedicated customer care, Human Resources (HR) and Revenue Assurance functions, and
- lack of customer contact historic analysis.

In the interim, the Malta Resources Authority (MRA) had concluded, in November 2010, a first technical review of ARMS Ltd. operations. As stated by MRA, this review was carried out following reports of customer complaints on ARMS Ltd. operations. Objectives of the MRA exercise were threefold: (a) to ensure consumer protection; (b) to identify any major deficiencies in the billing and related systems; and (c) to determine whether further regulatory action is necessary.

Salient findings from this Report included: a lack of effective and detailed planning by EMC and WSC for the transition from the legacy to the new system; high dependency of ARMS Ltd. on IBM for various areas of operations; unclear lines of responsibility; lack of evidence of a rigorous quality assurance and testing on data; deficiencies in the management of the customer care function; and an uncertainty of professional future for the WSC/EMC employees affected by the ARMS Ltd. setup.

Eventually, the level and frequency of complaints in the media subsided. This notwithstanding, a trickle of complaints was still featuring, the main ailments being exceptionally high bills, claimed by consumers to be erroneous and the irregularity in the issuance of bills which was (consumers claimed) disrupting cash flows of families and businesses alike.

In April 2012, there was renewed attention in the media, this time in connection with smart meters and their various claimed technical deficiencies.

In view of the considerable investment in the IUBS project in general and in the smart meter (and supporting software/hardware systems) deployment in particular, NAO considered these claims to constitute an audit concern, in that the much touted security offered by the smart meters system was seemingly not as resilient as had been advertised. The consequences, from NAO's point of view as guardian of the public purse, were that pilfering and meter tampering would continue to sap away legitimate income (for EMC) emanating from the generation, distribution and supply to consumers of electricity. In turn, this would affect adversely the return on investment of the entire IUBS project.

Triggered by the above concern, NAO Special Audits and Investigations (SA&I) carried out preliminary research on smart meters as deployed in Europe and the United States (US). In addition, further analysis of documentation and data relating to ARMS Ltd. operations, and the smart meter deployment programme locally, were analysed. Apart from online research, MRA's follow-up (second review) of ARMS Ltd. operations, issued in 2011, together with media reports were perused.

On the basis of various identified audit concerns, NAO decided to carry out a follow-up to the November 2011 (NAO) Report, with an extended audit scope to include implementation of smart meters locally, issues and concerns as identified by MRA in its second review and technical queries aimed at determining ARMS Ltd./EMC's efforts to counter against the allegedly easy manner with which smart meters could be tampered with. Such a decision was communicated to ARMS Ltd. in April 2012. The communication in question posed various pertinent questions and solicited feedback and response from ARMS Ltd.

A preliminary meeting was held in June 2012. During this meeting ARMS Ltd. and EMC gave NAO a presentation addressing, albeit cursorily, NAO's declared concerns. ARMS Ltd. and EMC further submitted various documents in support of the presentation contents and in answer to questions posed by NAO. Eventually, NAO SA&I compiled a set of four themed questionnaires dealing with:

1. Follow-up on NAO report of November 2011;
2. Follow-up on second review MRA Technical Review of Operations of ARMS Ltd. (2011);
3. Points arising from desk research in connection with smart meter tampering, and
4. Points arising from ARMS/EMC presentation of June 2011.

Questionnaires 1 and 2 feature as Appendices 1 and 2 respectively of this Report. Questionnaires 3 and 4, due to the fact that contents are technically sensitive, are not being included by default. However, findings emanating from ARMS Ltd./EMC's response to these questionnaires feature in the Report text as appropriate.

In view of the above, Terms of Reference for the follow-up audit were defined as follows:

- to determine the level and substance of take-up of NAO's recommendations to ARMS Ltd. as featuring in the original 2011 (NAO) Report;
- to determine the level and substance of take-up of MRA's recommendations to ARMS Ltd. as featuring in the second Operational Review of 2011;
- to clarify and obtain further information on concerns and issues identified by NAO through perusal/analysis of media reports and online content in connection with smart meter tampering, and
- to clarify issues related to the June 2012 ARMS/EMC presentation and submitted supporting documents.

By way of methodology, it is pertinent to note that the exercise was carried out in terms of Para 9(a) of the First Schedule of the Auditor General and National Audit Office Act, 1997 (Act XVI of 1997) and in accordance with generally accepted practices and guidelines applicable to the NAO.

During the course of this follow-up exercise, a number of meetings were held with various officers directly involved in operations at ARMS Ltd. and in the deployment and running of smart meters.

NAO notes the positive attitude assumed by ARMS Ltd. in coordinating the flow of information from and to NAO during the course of the exercise. Relevant documentation and information required were, to the best of our knowledge, made available to this Office. NAO findings and conclusions are based on the evaluation of such documentation and information.

Unless otherwise indicated, this Report reflects the position as at end May 2012, the cut-off date for NAO's exercise. Events occurring after this date are not reported on.

Reader's attention is also drawn to the hybrid/compendium nature of this exercise, being in part a follow-up of two reports, issued by two different entities (National Audit Office and Malta Resources Authority), a set of audit concerns, related to the main topic, arising through the local implementation of a programme (the Smart Meter programme) and material/articles in local media/internet dealing with particular smart meter issues (tampering).

This compendium of scopes necessitated widespread coverage. As the work involved was not a formal investigation, NAO did not carry out any independent verification of EMC and ARMS Ltd. declarations, simply limiting its actions to reporting these and commenting thereon. In cases where applicable, however, both entities were asked to furnish official data and statistics in substantiation of their statements.

All statements and declarations were obtained in hard copy format to further ensure accountability and the assumption of responsibility for the responses being furnished.

The decision not to embark on a fully-fledged investigation was taken consciously by NAO, even in view of the fact that smart meter and the back-end systems constitute a highly vertical and specialised activity involving complex technical considerations. For NAO to effect a formal investigation, this would have necessitated the commissioning of a specialist in the field. Keeping in view that such expertise is not available locally, costs would have been prohibitive - cost benefit analysis, even in view of the fact that much of the (locally) touted theft may be exaggerated, would have given a negative result.

This qualification covers only the purely technical issues. All other issues, especially those dealing with administration and management, are dealt with in the customary and traditional approach deployed by NAO.

The Questionnaires

As reported earlier in the introductory chapter of this Report, a meeting held on 1 June 2012 enabled ARMS Ltd., EMC and WSC officials to submit replies, clarifications and explanations as necessary to NAO's preliminary questions dealing with topics taken on as audit scope. The meeting comprised, apart from discussions of formal response to questions submitted in writing, a presentation by means of which the key player entities covered various aspects, technical and administrative, of the Smart Meter Programme as being implemented locally within the wider context of the IUBS.

Analysis of the presentation material and of the submitted response led to the formulation, on the part of NAO, of further, more specific questions dealing with more concrete issues and concerns, including technical matters especially where smart meters were concerned.

The end product of the analysis was a set of four themed questionnaires. The following four chapters of the Report deal, individually, with the four questionnaires, the response provided by ARMS Ltd./EMC/WSC and NAO's subsequent comments and opinion.

As indicated earlier, the questionnaires cover four topics related to the extended follow-up exercise, namely: follow-up on NAO's report and on MRA's second operational review, the smart meter programme implementation and tampering of meters.

Questions included in the first two questionnaires are reported upon in sequence, in the main in an individual manner. For reasons of security, given that various responses given contain information of a technical nature, questions in the last two questionnaires, and responses thereto, are handled in a more 'abstract' manner, with the Report delivering the concepts involved and the gist of the responses, but not revealing the detail. This approach was deemed necessary and was suggested by ARMS Ltd., WSC and EMC and agreed to by NAO in view of the fact that many of the responses, and the various questions themselves, could, in the wrong hands cause harm to the system in that issues of security, resilience, monitoring of fraud/theft are discussed freely in the questionnaires.

Questionnaire 1 – Follow-up to AG Report of 2011

Online payments registered (Questionnaire 1, Question 1.1)

During the original audit, ARMS Ltd. had projected a target of €1 million per month for online payments, to be achieved by end 2011. At the time, ARMS Ltd. had managed circa €244,000 (in July 2011).

Online payments fell drastically short of this projection and historic data submitted by ARMS Ltd. shows that, in effect, online payments in December 2011 amounted to approximately €278,000. This figure changed to about €495,000 in May 2012.

WSC and EMC average debtors (Questionnaire 1, Question 1.2)

As per Heads of Terms agreement, ARMS Ltd. is to improve average debtors of both WSC and EMC by 5 per cent per year. The original benchmark year (2008) was eventually postponed to 2009, as the '2008' figures in effect comprised 15 months and would have distorted the situation.

Debtor days (receivables divided by revenue and multiplied by 365) for December 2009 stood at 200 days. By December 2010, this figure was reduced by 16 per cent to 168 days. In December 2011, a further decrease of 12.5 per cent, bringing the figure down to 147, was achieved.

ARMS Ltd. managed and bettered its projection.

Hand-held devices (Questionnaire 1, Question 1.3)

In its report, NAO had noted that since the changeover to SAP[1], hand-held terminals did not retain a record of previous consumption readings.

By May 2012, ARMS management claimed that the new hand-held devices acquired as replacement for the obsolete models, contained the mentioned functionality.

Reversals (Questionnaire 1, Question 1.4)

NAO's Investigation had noted that out of nearly two million invoices issued, 7 per cent were reversed for period January 2010 to August 2011, with the main reasons being wrong estimates, reversal of bills not submitted to customers and default.

Despite the fact that considerable resources need to be deployed to issue a reversal, implying a significant opportunity cost to the company, and NAO's recommendation to ARMS Ltd. to address this issue, no improvement could be reported as at May 2012. During the period September 2011 to May 2012, reversals averaged 7.45 per cent of bills issued. Basing on ARMS management's comments, these seem resigned to the fact that running the system makes necessary this volume of reversals, a volume deemed exorbitantly high by NAO.

[1] SAP is an enterprise software to manage business operations and customer relations.

Number of locked readings (Questionnaire 1, Question 1.5)

Data provided by ARMS Ltd. during NAO's investigation had established a considerable number of accounts which had 'locked' readings for which bills were not being issued. In August 2011, about 51,000 readings were locked. By end 2011, the figure had been reduced close to 46,000. The (laudable) downward trend continued decreasing the following year – by May 2012, locked readings stood in the region of 22,000. From data submitted by ARMS Ltd. it resulted that, due to changes within the system, the number of generated locks dropped from 43,000 in August 2011 to 24,000 in May 2012. In part, this explained the downward trend. The ratio of locks to readings likewise improved from 10.19% in August 2011 to 8.32% in May 2012.

Analysis of data held at ARMS Ltd. (Questionnaire 1, Question 1.6)

Further to carrying out an analytical exercise of data as held by ARMS Ltd., NAO had recommended that ARMS management utilises better the available data to achieve a higher level of efficiency in its operations.

ARMS Ltd. claims that NAO recommendations were not taken up as management prefers "*to rely on the results we periodically obtain which are based on querying the entire population of data*". NAO, in its Report, had clearly stated that sampling had been resorted to for the purposes of the Investigation. The entire exercise was carried out to demonstrate to ARMS management some of the various key indicators that could be (but were not being) extracted from the data as stored by ARMS Ltd.

It stands to reason that ARMS Ltd. as owner of the data and with full access to the entire datasets can, and should, develop routines that query the entire population and obtain even more precise results.

On a separate but related note, NAO feels it pertinent to draw ARMS management's attention to the fact that the analyses carried out by NAO were, as stated in Appendix 7 of the original Report, statistically representative with confidence intervals for the three categories of accounts being quoted at the industry standard of 95 per cent confidence level.

Key Performance Indicators (Questionnaire 1, Question 1.7)

In its Report, NAO opined that ARMS' analysis of its Key Performance Indicators did not give a thorough indication of the Company's holistic operating scenario. The Report gave various examples of these deficiencies.

Recent KPIs submitted by ARMS Ltd. show that NAO's recommended KPIs relating to billing, debt management and cash collection were not taken up by ARMS Ltd. and, to date, indicators still fall short of the originally-drawn-up KPIs that were based on five value drivers: Revenue; Employee Satisfaction; Marginal Improvements; Capital efficiency; Service Quality and Customer Satisfaction[2].

[2] July 2009: ARMS Ltd./IBM Change Management Team

Web Portal's registered users (Questionnaire 1, Question 1.8)

In May 2011, ARMS Ltd. launched the new web portal. A year after the launch, the number of registered users on ARMS' online portal stands at approximately 12,000 users. It would appear that, without the features available through meter connection to the back end, the functionality of the portal is somewhat limited and does not induce customers to access it.

Recommended Revenue Assurance Unit (Questionnaire 1, Question 1.9)

During NAO's Investigation, ARMS Ltd. had still not established a Revenue Assurance Unit aimed at identifying, quantifying and enabling the utility to recover 'non-billed revenue', as per the 'Proposed Organisational Design' outlined in July 2009, apart from other revenue collection related tasks.

To date, ARMS Ltd. is still lacking a dedicated, stand-alone Revenue Assurance Unit and deals with credit control through a unit previously known as the Water Services Credit Control. EMC's declared intention is to change the approach to addressing meter tampering from 'inspect and detect' to 'detect and inspect'. This is a change that will become feasible with the deployment of smart meter technology and the supporting software. Such an approach makes it even more critical for ARMS Ltd. to prepare ahead and set up a Revenue Assurance Unit as a fully-fledged, dedicated unit and to train the unit's staff in areas deemed of relevance to the tasks they will be meant to carry out. Notably, such a unit would incorporate an investigative function aimed at detecting meter tampering, amongst other skills, ensuring that ARMS Ltd. manages to better its billing to consumption ratio.

Payment options (Questionnaire 1, Question 1.10)

No change was reported in the payments options list featured in the 2011 Report. ARMS Ltd. believes this to be extensive and would only consider new avenues if proven to be cost effective.

Direct Debit payments (Questionnaire 1, Question 1.11)

NAO's 2011 Report stated that a more consistent approach towards increasing direct debit payments was to be adopted by ARMS Ltd.

As at June 2012, ARMS Ltd. had not taken any action in this regard. Clients with direct debit facilities increased to just over 4,200 (end May 2012) from 2,300 in November 2011. However, NAO considers this figure to be marginal, keeping in view that, as at July 2011, customer accounts registered with ARMS Ltd. were in excess of 277,000. NAO's original recommendation is deemed to be still valid and pertinent.

Payments made via ARMS online portal (Questionnaire 1, Question 1.12)

As reported in Question 1.1 above, as at May 2012, online payments amounted to approximately €495,000. This figure was made up of approximately 2,300 accounts. While there was a registered improvement since July 2011 (about 1,200 payments amounting to approximately €244,000), ARMS Ltd. failed to reach the self-set target. In its original Report, NAO had highlighted the issue of higher billing processing costs for cash/cheque payments compared to those for internet-based technology payments. ARMS management had also mentioned the intention to adopt appropriate strategies and to launch marketing campaigns to promote cyber payments. It is evident from the results obtained that more needs to be done in this regard if pre-set targets are to be met.

ARMS Call centre (Questionnaire 1, Question 1.14)

As per ARMS' KPIs, which assess the company's call service and, albeit in a very limited fashion, customer services, the number of calls taken has increased from 73 per cent of total calls in May 2011 to 83 per cent of total calls in May 2012. It is also pertinent to note, however, that abandoned calls increased from about 2,700 in May 2011 to about 3,600 in May 2012.

In absolute terms, answered calls increased from approximately 16,000 in May 2011 to about 18,000 in May 2012. The issue of abandoned calls is concerning to NAO and should cause concern to any service provision entity. NAO opines that ARMS Ltd. should look into reasons for such action by consumers.

Trend settings to comprehend progress made (Questionnaire 1, Question 1.15)

In its Report, NAO noted that lack of studies and trend settings on the part of ARMS Ltd. was limiting management in comprehending progress made in specific areas.

ARMS management did not deem any remedial action necessary and opted not to formally analyse past information as recommended by NAO. NAO looks askance upon this decision. It is inconceivable how a service provision entity, with a customer base in the range of 300,000, who transacts at least six times per annum, takes such a stand. The decision is considered to be even more serious when one takes into account the significant investment made to procure and deploy a very sophisticated package geared to provide excellent support in the fields of billing and customer relations management.

It would seem that ARMS Ltd. obtains reassurance in the regard of loyal customers through the fact that the entire customer base has no option but to transact with EMC/WSC/ARMS Ltd. for the supply of electricity and water. This is short-sightedness in strategy and policy and can only bring about unwelcome results for the triumvirate in the long run. It is also averse to the present-day concept of ensuring customer-concentricity. Quite apart from these considerations, it is pertinent to note that, as quoted in the original NAO Report, according to ARMS Ltd. its main function is to provide customer services on behalf of the Utilities.

ARMS' move to Gattard House (Questionnaire 1, Question 1.16)

Following its move to Gattard House on 24 August 2011, ARMS Ltd. did not obtain any form of official feedback from its customers regarding the shift to the new premises. This implies that almost a year after its move, ARMS Ltd. has still not gauged customers' perceptions and opinions regarding ARMS' operations from the 'new' offices in Blata l-Bajda. NAO cannot but comment negatively on ARMS' lack of efforts to discover what customers perceive about the new premises, especially following the chaotic situation during 2010 and 2011 which was, in part, to be solved by a move to new premises aimed at providing a more efficient customer service. This deficiency, coupled with the lack of formal data analysis to categorise complaints into diverse natures/issues as described in Question 1.15 above, is indicative of an aversion on the part of ARMS management to formally gauge its performance levels through the perception of its consumers. NAO considers this to be one of the major weaknesses of ARMS Ltd. This weakness is impinging negatively on the possibility of the company's managing to carry out business transformation processes that would turn ARMS Ltd. into a more client-friendly company.

ARMS' Business Analyst (Questionnaire 1, Question 1.17)

In NAO's 2011 Report, it was reported that ARMS Ltd. was in the process of recruiting a second Business Analyst and a Corporate Services and Human Resources Co-ordinator.

ARMS management claims that ARMS Ltd. recruited a Business Analyst in April 2012 and has re-issued a call for another business analyst in view of the resignation of the first Business Analyst.

Deploying ARMS' Business Analyst (Questionnaire 1, Question 1.18)

With regard to the company's Business Analyst, required for the generation and analysis of customised management reports, ARMS management claims that the company's Business Analyst issues reports as requested by management. However, NAO's concern with respect to the lack on the part of ARMS Ltd. to analyse stored data (for example customer complaints) and categorise these to obtain current and previous trends and identify specific areas of weakness/efficiency in customer service provision, remains. This concern, deemed fundamentally critical to the provision of good customer service, is addressed through Questions 1.15 and 1.16 above.

ARMS' Quality and Service Coordinator (Questionnaire 1, Questions 1.19 and 1.20)

ARMS management states that a Quality and Service Coordinator has been recruited and charged with the responsibility of all issues related to the portal.

An HR function for ARMS Ltd. (Questionnaire 1, Question 1.21)

In 2011, NAO had reported that ARMS Ltd. was not equipped with an HR department.

In this regard, ARMS Ltd. states that it has recently employed a Human Resources and Corporate Services Coordinator responsible for handling of HR issues.

Questionnaire 2 - MRA 2nd Technical Review

Credit Control for Heavy Consumers (Questionnaire 2, Question 2.1 to 2.4)

ARMS Ltd. took over responsibility for the credit control of heavy consumers in February 2011. At the time, debtors (heavy consumers) stood at €104.6 million. By May 2012, the total was €91.8 million. This reduction is laudable and is the result of various administrative actions taken by ARMS Ltd. to better manage these debtors.

Debtor Days (Questionnaire 2, Question 2.5)

The positive trend (for debtor days) reported upon in Question 1.2 generally continued up to the latest figure available. In May 2012, debtor days stood at 144 days.

Document Management System (Questionnaire 2, Question 2.6 to 2.7)

In 2011, ARMS management had reported that the company was "*in the process of implementing Government's Document Management System*" to aid the centralisation of information.

When asked to report upon progress, ARMS Ltd. claimed that the company has been informed that negotiations for the software and related services had fallen through.

While ARMS Ltd. claims that "*certain categories of documentation such as client letters or application forms are scanned and attached to clients accounts*", this is only a mechanised version of hardcopy files. On the one hand, such a practice admittedly facilitates storage/retrieval of documents but falls short of providing ARMS Ltd. with any statistical data based on categorised/analysed data.

Accepting applications on behalf of EMC (Questionnaire 2, Question 2.9)

As per MRA 2011 Report, ARMS Ltd. had stated that it will be considering accepting applications on behalf of EMC.

Application processing and handling duties for EMC were taken over by ARMS Ltd. on 1 March 2012.

ARMS' Service Level Agreement (Questionnaire 2, Question 2.10 to 2.12)

MRA's 2011 Report had noted that the ARMS Heads of Terms agreement established that "*formal Service Level Agreements (SLAs) would be entered into by ARMS Ltd*."

To date, despite several related meetings and discussions, SLAs are still not in place.

NAO strongly urges the adoption of SLAs. The absence of a clear quantification of deliverables and delivery timeframes inhibits the availability of an effective set of benchmarks against which ARMS Ltd. performance can be gauged.

Programme Management - Reliance on IBM (Questionnaire 2, Question 2.13)

As per MRA 2011 Report, ARMS Ltd. remained heavily reliant upon IBM for system support.

At present, ARMS Ltd. remains dependent on IBM and claims that post-2013 it will be considering the extension of its maintenance agreement with IBM or the issuance of a tender for the maintenance of its systems.

With systems of such complexity, a certain degree of dependence is to be expected. However, NAO opines that ARMS Ltd. should take over all functions that are within reach of its competencies. In addition, in order to ensure that the situation does not precipitate to one of crisis and urgency, ARMS Ltd. needs to start considering and planning for its post-2013 actions now, and ensures that no vacuum materialises between the date when the present contract expires and the new replacement contract becomes effective. In view of the critical necessity of the billing function, any changeover should be seamless.

PDAs for meter readers (Questionnaire 2, Question 2.14 to 2.16)

MRA, in 2011, reported that ARMS Ltd. was in the process of purchasing new Personal Digital Assistants (PDAs) for meter readers aimed at addressing the related shortcomings identified in MRA's first Review of 2010.

In this regard, as reported upon in Question 1.3, ARMS Ltd. has acquired replacement devices which overcome these shortcomings.

Meter readers workforce (Questionnaire 2, Question 2.17 to 2.19)

Meter readers employed in May 2011 amounted to 23. No change in this figure was reported in May 2012.

Contingency plans – going 'smart' (Questionnaire 2, Question 2.20)

ARMS Ltd. had planned to have the majority of smart meters installed as well as the entire communication and infrastructure needed to operate the automated meter management system by January 2013. This information was furnished to NAO by ARMS Ltd. Executive Chairman during a meeting held on 1 July 2011. Since then, there has been a 12-month postponement in project completion date as in May/June 2012 ARMS Ltd. stated that go-live for back-end connection is end 2013.

Should the system fail to go 'smart', ARMS' contingency plan is to retain manual meter reading. However, ARMS management claims the company is confident that the system *will* go 'smart' in 2013.

Waiting and Service times (Questionnaire 2, Question 2.21)

As per ARMS' historic data, waiting time as at May 2012 has decreased by approximately 3 minutes (circa 10 per cent) when compared to waiting time in May 2011.

An improvement was also registered in terms of service time, which has dropped even when the service rendered included cash payments.

Questionnaire 3 – Smart meter tampering

The phenomenon of meter tampering

Attempts to tamper utility meters have, of late, rocketed, at a global level. The increase in utility rates is undoubtedly one cause.

Recent reports in sections of the local media led NAO to research the matter at a global level. The Internet abounds with 'information' on meter tampering.

This phenomenon raised the issue to the level of an audit concern. NAO accordingly compiled the third of the set of questionnaires on issues dealing exclusively with smart meter tampering and counter measures possible/being adopted.

As stated earlier in this Report, this questionnaire is comprised solely of detailed technical queries, the answers to which may provide new knowledge to those interested/involved in meter tampering. As such, this Chapter reports the concept and gist of the questions and respective answers, rather than revealing the detailed contents of both.

Media and internet allegations

EMC claims that (local) media reports that it is possible to obtain meters that have built-in reduced rates are untrue. The technology deployed in the meter-to-back-end connection works in a manner as to render this impossible.

In a similar manner, EMC is of the opinion that "*many of the (Internet) advertised methods have proven to be gimmicks which have no effect on the meter*". The Corporation asserts that it keeps abreast with relevant internet content and as a member of Euroelectric consults peer organisations abroad.

Anti-tampering features built into the system

The Corporation admits that a small selection of installed meters is "*susceptible to magnetic tampering*". However, it is pertinent to note that logs of any such tampering get recorded. These may be accessed at a later stage and discovered through data analytics (as reported in Questionnaire 4 'Counter measures combating meter tampering'). In this regard, one should keep in view the fact that smart meters deployed have the functionality of comparing total billed against total generated power. A discrepancy in these figures raises an automatic alarm.

In addition, EMC claims that the models of meters deployed have a high degree of built-in protection against tampering. EMC also asserts that these inhibitors are supported by a framework that includes physical and network/communications protectors against tampering. The Corporation states that such measures are further supported by audit trails and a process of surprise inspections.

Finally, EMC claims that plans are under way for a new replacement model of meter that will be unaffected by magnetic fields.

Anti-tampering actions by EMC and ARMS Ltd.

EMC informed NAO that cases of tampering are referred to the Police and those responsible are liable to be charged in a court of law.

The Corporation revealed its consideration to reinforce its Revenue Protection Section. As in the case of ARMS Ltd., NAO strongly recommends that the Corporation takes immediate action and steps up efforts in this regard. This issue is also reported upon in Questionnaire 1, Question 1,9 above where ARMS Ltd. is concerned, and in Questionnaire 4 'Counter measures combating meter tampering'.

In view of the fact that ARMS Ltd. has a business analyst function that can effectively and efficiently extract customised management reports and data from the consumer datasets, it may be beneficial for EMC's Revenue Protection Section, ARMS Ltd. Revenue Assurance Section and ARMS Ltd. Business Analysts to combine resources on this highly sensitive matter.

Practical examples of installations involving tampering

In order to gauge the resilience and robustness of EMC's protection system built around the deployed smart meters, NAO downloaded a number of articles from the Internet, each detailing what were being purported to be different methods with which smart meters of various types could be tampered.

These cases were passed on to EMC, as part of this questionnaire. In each case, EMC furnished technical response explaining the shortcomings of the methods of tampering as applicable. Some methods were shown to be incompatible with locally deployed meters, as technology utilised differed. Other methods were proved to have no effect on meter function. Yet another set of methods, although possible to implement, were shown by EMC to leave a physical trace and/or to generate an electronic audit trail when installed.

Hardware obsolescence

The matter of hardware obsolescence was also raised by NAO. Rather than 'natural' obsolescence simply through the passage of time, there is the possibility of the meters deployed becoming obsolete due to advances in meter tampering technologies.

EMC claims that it has protected its investment in the smart meter programme through the inclusion of a contractual upgrade service by IBM "*as and when required*". EMC also claims that WSC has a similar licence with its supplier for maintenance and upgrades.

Such upgrades are carried out remotely, with access being through secure codes, and being recorded in an audit trail. EMC claims that these routines have been tested.

Questionnaire 4 – Local implementation issues

As indicated earlier in this Report, the fourth NAO questionnaire, similar to the third, albeit to a lesser extent, comprised a number of questions which, together with relative response, constitute commercially and technically sensitive information that may, in the wrong hands, cause damage to the system. For this reason, the approach adopted in the case of Questionnaires 1 and 2[3] was not followed in this instance. Instead, the questions and response submitted were analysed and formulated in such a manner as to enable the reporting thereof in gist.

Meter (hardware) installation

As at May 2012, meter installation projections were unmet – figures submitted by ARMS Ltd. show that 59 per cent of projected water and 79 per cent of (projected) electricity meters had been installed. Asked for justification, ARMS Ltd. claimed that the 20 per cent variance was due to changes in water meter technologies. Such changes, according to ARMS Ltd., became manifest following the pilot project and were recommended by IBM. Additionally, ARMS Ltd. opines that other sources contributing to the variance are the differing communication infrastructures utilised by the two networks. The 'common' 21 per cent shortfall, according to ARMS Ltd., is attributable to premises which were found closed.

While piloting is a laudable exercise, in that it serves, as occurred in this instance, to help the project implementer identify problems early during project implementation, NAO shows concern that deficiencies in the chosen technologies should manifest themselves during the project implementation stage. However, ARMS Ltd. justified this phenomenon by claiming that the prevailing situation regarding consumer density is characteristic to Malta, inhibiting project implementers to refer to other countries' experiences in this regard. Being a very specialised task, and not having access to a technical expert, NAO was not in a position to confirm this justification or otherwise.

ARMS Ltd. currently estimates that electricity meters installation will be completed by the second quarter of 2013, while water meters' estimate is end 2013[4]. This excludes those meters housed in closed premises as reported upon above. ARMS Ltd. claims these will be handled on a case-by-case basis. In view of the existing shortfall from the projected figures (as at May 2012), NAO augurs that ARMS/EMC/WSC manage to meet the project completion dates.

Back-end connection (smart mode operation)

Even more critically, while the hardware installation phase of the programme follows a mile-stoned plan, with a projected number of installations for each time slice, the connection to the back-end,

[3] Questions are reproduced verbatim and responses thereto are reported upon in detail and commented upon.

[4] It is pertinent (and concerning) to note that, as per Question 2.20 above, the programme completion date has undergone a twelve-month postponement – the originally-set completion target date was January 2013.

enabling the meters to function in smart mode, has no such staggered deliverables but only a single go-live date, namely end 2013.

NAO questioned this 'big bang' approach, with ARMS Ltd. justifying same as follows: *"The recommendation was primarily based on the experience of xxx[5] who first deployed all the meters and then went live with remote management after completion of the deployment."* EMC Ltd claims, in support of this methodology, that advantages are to be reaped as communication improves in direct proportion with the number of meters deployed.

NAO showed concern that automatic billing may be delayed - it is to be noted that (end) 2013 is the (revised) target date. However, ARMS/EMC/WSC showed confidence that communication in smart mode, and hence automatic billing, would commence within one week from meter commissioning and the establishment of their communication with the remote meter management system. The two Corporations will each be responsible for the commissioning of their respective meters.

Given the tight schedule (end 2013 is set as completion date for water meters hardware installation and the same date is simultaneously the target date for smart-mode operation go-live), NAO requested details of contingency plans in case the set targets were not met. In such an eventuality, the present method of manual meter readings shall prevail.

The entire programme is a first timer for both EMC/WSC/ARMS Ltd. and for the country. This in itself creates a fair degree of risk and uncertainty where meeting deadlines is concerned. Proof of this is the fact that, even where hardware installations are concerned, works are behind schedule and the original target completion date was postponed by twelve months from January to December 2013. On a positive note, however, it is pertinent to state that a pilot project, involving a sample of meter installations[6], has been in operation for a number of months.

<u>Robustness/resilience of electricity meters acquired</u>

NAO posed ARMS Ltd./EMC a number of technical, detailed questions in relation to the meter hardware acquired. NAO's concern was raised by media reports and Internet content dealing with the alleged ease with which smart meters could be tampered. This questionnaire deals with issues related to the actual acquisition of the meters. Issues directly concerning the alleged deficiencies of the smart meter concept are addressed in above Questionnaire 4.

The tendering process was commenced in early 2005, and the resulting Request for Information was issued in November 2005 while closing date of the tender was end January 2006.

Asked in connection with the resilience and robustness (in terms of hacking) of the meters deployed, EMC attests that, at the time, the Corporation had opted for the most secure type of meter, basing on information available to it. However, EMC also confirms that hacking technology that up to five

[5] 'xxx' is a European electric utility company with operations in over 40 countries.
[6] As at May 2012, ARMS Ltd. figures show that 68,814 electricity and 88,762 water meters were connected to the back-end system.

years ago was not easily available is now readily and cheaply obtainable. This breakthrough in technology had rendered a small proportion of meters susceptible to tampering.

NAO's concern in connection with possible hacking featured prominently in Questionnaire 3 (and 4). The Office investigated further the issue with an aim of establishing what, if any, counter measures were being taken to combat this unwelcome phenomenon of meter tampering.

<u>Counter measures combating meter tampering</u>

In response to various questions posed by NAO, EMC indicated the multiple counter measures that were being taken/considered.

Modified meters, specifically designed to resist tampering by the so-dubbed 'super magnets', are being produced. EMC claimed these new generation meters are being discussed between the Corporation and IBM, and will soon be available for installation.

In the meantime, NAO notes EMC's technical opinion that much of what is written in the media and on the Internet (with respect to 'proven' cases of meter tampering) "*is either irrelevant or incorrect. Smart meters of the types being installed locally are no more susceptible to magnetic influence than other meters. However, smart meters offer better facilities and opportunities to identify such tampering.*"

Apart from prevention through the deployment, where and as deemed necessary, of these special meters, EMC claimed it is also currently planning the reinforcement of the existing revenue protection section. This is a laudable exercise and, as in the case of ARMS Ltd. (as opined in Question 1.9 above) efforts to produce tangible results should be stepped up.

In a similar manner, the project covering the design and deployment of data analytics to enable fraud detection should likewise be given priority.

<u>Regularity of billing</u>

In the 2011 Report, NAO had run extensive tests on a one per cent sample of ARMS Ltd. consumer data. These results featured prominently in the report and were discussed at length. One particular area covered was billing frequency. At the time, NAO results showed that at end June 2011, 86.07 per cent of residential and 79.71 per cent of non-residential accounts had been invoiced four times or more during the preceding twelve-month period.

ARMS Ltd. results emanating from tests run on the entire population of accounts provided a similar trend, with 87.1 per cent and 80.1 per cent respectively for residential and non residential accounts for May 2011. By May 2012, ARMS Ltd. results show an improvement thereon - 91.4 per cent of residential and 80.5 per cent of non-residential accounts were invoiced a minimum of four times during the preceding twelve months.

The report at a glance

Smart meter installation

- Go-live date postponed from January to December 2013

- Implementation is already behind schedule

- Big-bang approach for go-live (back-end connection)

NAO concern in connection with the achievement of the (revised) go-live date for completion of meter installations and meter-to-back-end connection

Smart meter tampering

- EMC holds most internet and local media allegations (tampering) to be untrue

- Robust and resilient protection mechanisms protect the system according to EMC

- Protection regime is a mix of prevention and corrective action on detection

- Revenue Protection Unit is to be strengthened

- NAO examples of touted meter tampering techniques were proven by EMC to be ineffective and/or to leave traces that cause discovery

- Risk of hardware obsolescence is reduced through contractual agreements with the suppliers for upgrades

NAO is reasonably assured, on the basis of technical information as submitted by EMC, of the resilience and robustness of the deployed systems – as long as the right steps are taken by way of monitoring and control

ARMS Ltd. operations

- Non achievement of online payments targets
- Low take-up of portal usage
- Small number of direct debit facility users
- Better debtors management
- Improvement in calls taken
- Increase in abandoned calls
- Improved service/waiting times for visiting clients
- Improvement in the one-stop-shop concept adoption

- Better billing frequency
- Bill reversals still high
- Less locked readings
- Continued reliance on IBM
- Restored functionality to meter readers' PDAs

- KPIs remain unchanged
- No action regarding the Revenue Assurance function
- No SLAs formulated to date
- Continued reluctance to resort to statistical analysis of data

The lack of data analysis to establish trends and identify problems needs addressing

KPIs in use need revisiting

SLAs need to be formulated

Continuity for systems post-2013 is a must

The Revenue Assurance Unit needs to be strengthened

Better customer orientation is called for

Conclusions and Recommendations

Through this exercise NAO followed up its 2011 ARMS Ltd. Report and MRA's 2011 technical review of ARMS Ltd. operations. The exercise also looked into status and projections for the local smart meter programme, together with allegations dealing with smart meter tampering.

ARMS Ltd. proved effective in management of debtors and locked readings, the latter being a phenomenon that had plagued the new system. However, facilities such as online payments, usage of ARMS Ltd. portal and direct debit remain on the low side.

ARMS' call centre has improved the level of calls taken. Waiting and servicing times for visiting consumers have also been reduced. However, calls abandoned by consumers have increased.

Failure on the part of ARMS Ltd. to deploy more meaningful KPIs (as originally designed by ARMS Ltd. itself) is of concern. ARMS Ltd. also refuses to take heed of NAO's advice to statistically analyse consumer data to establish trends and identify/quantify consumer complaints with precision. In general, even in view of a lack on ARMS Ltd. to gauge customer satisfaction levels and to determine wants/needs, for example through surveys, this seems indicative of a lack of the right approach to customer orientation on the part of ARMS Ltd.

NAO looks askance at the fact that, despite the fact that ARMS has now been in operation for a number of years, the agreed-to Heads of Terms, signed between EMC/WSC/ARMS Ltd. are still missing SLAs – the sole components that would enable the benchmarking of ARMS Ltd. performance.

NAO draws attention to, and shows concern regarding, the fact that the originally-set go-live date has experienced a twelve-month postponement. Coupled with the fact that there already exists a significant lag between meter installations achieved and projected, this heightens NAO's concern.

Yet another related audit concern is that, basing on technical advice, a big bang approach has been assumed for meter-to-back-end connection (although a pilot project has been running for some time). The lack of a milestone plan, with staggered deliverables over different delivery dates, inhibits the effective prediction of project completion and timely corrective action in case of delays.

Media allegations concerning weaknesses in smart meters installed locally are in the main untrue according to EMC. This is in part due to EMC's deployment of a system that comprises tools to prevent fraud and facilitate detection on occurrence. EMC provided proof of this - a number of techniques touted to hamper meter functionality were shown to be either ineffective or traceable.

In conclusion, NAO is reasonably assured, basing on the technical information supplied by EMC, that as long as the necessary steps to ensure a continuous and adequate 'detect and inspect' approach are taken by the ARMS Ltd./WSC/EMC triumvirate, the phenomenon of meter fraud will be controlled through a regime of a combination of prevention and corrective techniques.

Appendices

Appendix 1 – Terms of Reference

Being a compendium audit, comprising multiple objectives, Terms of Reference for the 'extended' follow-up audit were defined as follows:

- to determine the level and substance of take-up of NAO's recommendations to ARMS Ltd. as featuring in the original 2011 (NAO) Report;
- to determine the level and substance of take-up of MRA's recommendations to ARMS Ltd. as featuring in the second Operational Review of 2011;
- to clarify and obtain further information on concerns and issues identified by NAO through perusal/analysis of media reports and online content in connection with smart meter tampering, and
- to clarify issues related to the June 2012 ARMS/EMC presentation and submitted supporting documents

These Terms of Reference were approved by the Auditor General prior to the commencement of the audit exercise.

Appendix 2 – Questionnaire 1

Points arising from ARMS Ltd. – Setting up and Operations – Report by the Auditor General tabled November 2011

p.16 – *The projected target for payments on-line by end 2011 is of Euro 1M per month.*

Q1.01. What was the amount of online payments registered in: (a) December 2011, (b) January, (c) February, (d) March, (e) April and (f) May 2012?

p.16 – *The Heads of Terms agreement establishes the appointment of ARMS Ltd. to perform all meter-to-cash functions for EMC and WSC on an exclusive basis. On its part, ARMS Ltd. is to improve (reduce) average debtors of both WSC and EMC by 5 per cent per year compared to the debtor figures of 2008 (audit) taken as the benchmark year.*

Q1.02. What is the situation with respect to the above?

p.20 – *It is noted that since the changeover to SAP, hand-held terminals do not retain a record of previous consumption readings. With the 'old' system, a warning was available to meter readers indicating whether a reading was 'normal', 'high' or 'low' when compared to previous readings.*

Q1.03. What steps have been taken to rectify this situation?

p.23 – *Data submitted by ARMS Ltd. indicates that during the period Jan 2010-Aug 2011, of the nearly two million invoices issued, 146,607 (7 per cent) were reversed. The three main reasons indicated for the reversal of invoices were wrong estimations (73,721), the reversal of bills not submitted to customers (35,350) and default (4,468).*

Q1.04. Kindly supply number of reversals issued for individual months, for the period Sep 2011 to May 2012. Per monthly figure, break down into main categories as per above.

Appendix 2 (continued) – Questionnaire 1

p.25 – Table 1 – Average monthly number of locks – July 2010 to July 2011

Month	Avg mthly no. of locks
Jul 2010	49,604
Aug 2010	52,992
Sep 2010	46,369
Oct 2010	51,713
Nov 2010	61,794
Dec 2010	67,762
Jan 2011	53,573
Feb 2011	41,028
Mar 2011	37,996
Apr 2011	38,090
May 2011	42,861
Jun 2011	48,156
Jul 2011	51,193

Q1.05. Kindly supply individual monthly figures for average number of locks for the period Aug 2011 to May 2012, both months inclusive.

In the investigation report, NAO had carried out analyses of data as held by ARMS Ltd. Salient results of these analyses were depicted as Tables 4, 5, 8, 9, 10, 12, 14 and in Appendix 7 of the report. Specifically, these covered: Billing activity – actual versus projected (Tables 4 and 5); Distribution of number of invoices issued (Table 8); Frequency of billing (Table 9); Days since last bill (Table 10); Days between bills (Table 12); Billing activity pattern (Table 14).

NAO had recommended that ARMS management utilises better available data in order to achieve better efficiency in operations, even through the identification of problematic areas. In this respect, the analysis exercises carried out by NAO were to serve as samplers, triggering initiative on the part of ARMS management to have the prevailing key performance indicators replaced by ones that reflected reality better and more accurately.

Q1.06. What progress has been registered in this regard?

p.32 – *Although the introduction of KPIs is a positive initiative taken by ARMS Ltd., it is felt that these are not thoroughly indicative of the company's holistic operating scenario. The categories/functions addressed in the current KPIs are generic and limit the Company's ability to anlayse in depth prevailing behaviours and trends…. Current indicators also fall short of the KPIs set out in the document 'Proposed Organisational Design' drawn up in July 2009 by the ARMS Ltd./IBM Change Management Team.*

Appendix 2 (continued) – Questionnaire 1

p.33 – *ARMS Ltd. may also consider the introduction of other KPIs with regard to billing, debt management and cash collection, to include: (a) reduction of debtor accounts overdrawn; (b) net bad debt target; (c) percentage of bills paid online to total active accounts; (d) number of bills paid by direct debit; (e) average lead time for issue of first bill to new customer from service installation; and (f) unbilled accounts.*

Q1.07. Has ARMS Ltd. taken action in order to implement any of the above proposals?

Q1.08. What was the number of registered users on the ARMS online portal as at end May 2012?

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p.34 – *ARMS Ltd. still has not established a Revenue Assurance Unit… NAO is of the opinion that ARMS Ltd. needs to strengthen the revenue assurance function with an adequately resourced unit, a structured approach and a defined set of policies.*

Q1.09. Can ARMS Ltd. report progress in this regard?

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p.37 – *Payments can be made in cash at ARMS' premises in Blata l-Bajda. Customers can mail a cheque or make debit/credit card payments to ARMS Ltd. or pay at banks and other collection agencies such as post offices and local councils (Gudja, Birgu, Ghaxaq and B'Kara). In addition, customers can arrange with ARMS Ltd. for the automatic direct debit of their bank account or may use their computer or phone to authorise payment from their bank directly or by debit/credit card payment to ARMS Ltd. through internet banking.*

Q1.10. Has ARMS Ltd. extended the payment options, as per extract above, and as listed on p.37 of the original report?

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p.37 – *Although online/direct debit payments are on the uptake, this Office is of the opinion that a more consistent and insistent drive towards these goals should be adopted by ARMS Ltd.*

Q1.11. What positive action has ARMS Ltd. taken in this regard?

Q1.12. How many payments have been made via the ARMS online portal for the months (individually) Aug 2011 to May 2012 (both inclusive)?

Q1.13. How many customers had a direct debit account with ARMS Ltd. as at end May 2012?

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p.53 – *In October 2010, ARMS' call centre answered a total of 11,310 calls whereas in May 2011 15,589 calls were taken.*

Q1.14. What was the number of calls taken, on a month by month basis, for the period June 2011 to May 2012 both months inclusive? For each month, please indicate calls lost, calls in mailbox and calls abandoned.

Appendix 2 (continued) – Questionnaire 1

p.54 – *ARMS management claims that knowledge related to the trend of the major type of complaints is obtained through customer feedback. NAO opines that an in-depth, formal analysis of past information is critical in this regard as it helps management to better understand current trends and predict, with a certain degree of assurance, future events. Such analysis is also a critical component when ensuring corrective action and timely resolution of issues arising. In addition, these exercises help gauge a company's performance over time, enabling management to compare prevailing with previous performance… The fact that no studies and trend settings are being carried out limits ARMS management in comprehending what progress is being made in specific areas.*

Q1.15. This was considered a major deficiency in the system deployed at ARMS Ltd. at the time of the NAO report. Has any remedial action been taken in the interim?

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p. 55 – *ARMS management claims that it has adopted various measures in its aim to give a better customer service to its clients and reduce the amount of complaints being registered during peak periods July to September 2010…. In August 2011, ARMS Ltd. moved to Gattard House, Blata l-Bajda. Such a move was aimed at providing a more efficient customer service through a better layout designed to handle customer queues.*

Q1.16. Has ARMS Ltd. obtained formal feedback (eg a survey) from its customers regarding its move to the new premises? If positive, please supply results of the surveying exercise.

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p.61 – *ARMS Ltd. has also recruited a Business Analyst and a Quality and Service Coordinator. The Company is in the process of recruiting a second Business Analyst and a Corporate Services and Human Resources Co-ordinator*

Q1.17. What is the situation concerning the Business Analysts? The Sunday Times of 3 June featured a call for applications for a Business Analyst within ARMS Ltd.

Q1.18. How have the Business Analysts employed been deployed (if at all) with respect to the customised management reports required and the databases interrogation necessary to produce such reports?

Q1.19. How has the Quality and Service Coordinator been deployed?

Q1.20. What was the outcome in connection with Q1.19 above?

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p.70 – *The original plan was to maintain a lean organisation, riding on WSC and EMC for certain support functions such as procurement and the human function so as to enable ARMS Ltd. to focus on its core operations. ARMS management attributes the fact that the company does not have an HR department as to date employees are still not officially employed with ARMS Ltd.*

Q1.21. The situation with employees has now changed. The workforce is now ARMS'. Has the company taken remedial steps in this regard and created an HR function/department?

Appendix 3 – Questionnaire 2

Points arising from Technical Review of Operations of ARMS Ltd. (2nd Review) dated 18 October 2011

p.6 – *ARMS Ltd. took over the functions of Credit Control and Debt Collection for Heavy Consumers which were previously handled by Enemalta Corporation;*

Q2.01. What progress can be reported in this regard?

Q2.02. When did ARMS Ltd. take over this function from EMC?

Q2.03. What were the aged debtors figures for heavy consumers before ARMS Ltd. took over?

Q2.04. What were the aged debtors figures for heavy consumers as at end May 2012?

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p.7 – … *debtors days (have been) reduced…*

Q2.05. Please furnish debtors days for the period May 2011 to May 2012 (month by month).

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p.7 – *ARMS are in the process of implementing Government's Document Management System thus aiding in the centralisation of information.*

Q2.06. Further details of the document management system are being requested.

Q2.07. In what concrete way is ARMS Ltd. envisaging that the system will aid in the centralisation of information?

Q2.08. What is the status regarding implementation of the system?

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p.7 – *After its move to new offices in Gattard House, ARMS Ltd. will be considering accepting applications on behalf of EMC thus further integrating services offered.*

Q2.09. What is the situation in this regard?

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p.9 – *We were informed that a Heads of Terms was signed between ARMS Ltd. and WSC and EMC ….It was noted that the agreement:…. establishes that formal Service Level Agreements would be entered into by ARMS Ltd. with EMC and WSC.*

Q2.10. What progress can be reported in this regard?

Q2.11. Have SLAs been drawn up, discussed and agreed to?

Q2.12. If positive, NAO SA&I would like to have copies of same, for evaluation and analysis purposes.

Appendix 3 (continued) – Questionnaire 2

p.10 – *Programme Management – IUBS – We were not provided with any additional documentation or measures to eliminate or reduce dependency on IBM. ARMS Ltd. remains heavily reliant upon IBM for system support.*

Q2.13. What are ARMS' contingency plans for post-2013 in this regard?

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p.12 – *We were informed that ARMS Ltd. are in the process of purchasing new PDAs for meter readers…. These PDAs should address the shortcomings identified in the November Review regarding obsolete PDAs and errors associated with these PDAs.*

Q2.14. What is the situation prevailing with respect to the PDAs that were to be purchased?

Q2.15. Is the problem referred to above solved?

Q2.16. What is the situation in general with the meter reader workforce?

Q2.17. Is natural wastage being replaced?

Q2.18. How many meter readers were in employ in May 2011?

Q2.19. How many meter readers were in employ in May 2012?

Q2.20. Is there any contingency plan should the system not go 'smart' in 2013?

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p.15 – The table included at the end of para 3.4.5.1 gives averages for waiting and service times for 2009, 2010 and for Jan to Apr 2011.

Q2.21. Kindly update with data for May 2011 to May 2012.
