DEBT MANAGEMENT OFFICE
NIGERIA

AN APPRAISAL OF IT SYSTEMS FOR DEBT MANAGERS:
The case of Nigeria
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OUTLINE

• Introduction:
  – IT support to Debt Management
  – Nigeria’s debt structure
  – The debt recording system in Nigeria
• Basic debt recording functions
  – Managing Operational Risk
• Risk management function
• Evaluation of the system
Imperatives of IT Support to DeM

• “...Debt management activities should be supported by an accurate and comprehensive management information system (MIS) with proper safeguards...” (Public debt management guidelines)

• The need to have an appropriate supporting IT infrastructure in public debt management therefore emanates from the following:
  – Accurate debt recording that supports prompt settlement, budgeting and accounting
  – Report Generation that supports Risk Analysis and Strategy Design
Nigeria uses CS-DRMS as a debt recording system

• CS-DRMS was adopted due to its apparent robustness in effective debt recording, settlement and other debt management functions such as the analytical tool, debt service projection module, etc.

• The system functions through an integrated local Area Network comprising dedicated and back-up servers

• The current version is CS-DRMS 2000+ Version 1.3
# Structure of Nigeria’s Public Debt (2007-2011)

Nigeria’s Total Public Debt Outstanding (2007-2011) (USD Million)

<table>
<thead>
<tr>
<th>Type</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External Debt Stock</strong> (%)</td>
<td>3,654.21</td>
<td>3,720.36</td>
<td>3,947.30</td>
<td>4,578.77</td>
<td>5,666.58</td>
</tr>
<tr>
<td>(% share of total)</td>
<td>(16.44)</td>
<td>(17.39)</td>
<td>(15.29)</td>
<td>(13.05)</td>
<td>(13.64)</td>
</tr>
<tr>
<td><strong>Domestic Debt Stock</strong> (%)</td>
<td>18,575.67</td>
<td>17,678.55</td>
<td>21,870.12</td>
<td>30,514.33</td>
<td>35,882.86</td>
</tr>
<tr>
<td>(% share of total)</td>
<td>(83.56)</td>
<td>(82.61)</td>
<td>(84.71)</td>
<td>(86.95)</td>
<td>(86.36)</td>
</tr>
<tr>
<td><strong>TOTAL</strong> (%)</td>
<td>22,229.88</td>
<td>21,398.91</td>
<td>25,817.42</td>
<td>35,093.10</td>
<td>41,549.44</td>
</tr>
<tr>
<td>(% share of total)</td>
<td>(100)</td>
<td>(100)</td>
<td>(100)</td>
<td>(100)</td>
<td>(100)</td>
</tr>
</tbody>
</table>
CS-DRMS supports debt recording and settlement functions

• Provides over 250 reports built into the system to assist the user monitoring the life cycle of the loans and validating the database

• The software has no link with the fiscal data of the MoF or Cash management data of the Office of the Accountant General of the Federation (OAGF). This causes a lag in data sharing and update

• However ComSec is already working with countries to link CS-DRMS with Financial Management Information Systems.
...but the system lacks connectivity with primary and secondary market platforms

- **Auctioning and Trading Module:** Even though CS-DRMS has an in-built auctioning module, the DMO uses the CBN’s (T24) software
  - The CS-DRMS is not directly linked to the CBN T24, therefore auction data is uploaded into the CSDRMS domestic module through an interface (the XML Tool) after each auction

- **Interface with the Market:** There is currently no interface between the CS-DRMS and other local or foreign financial data vendors (such as FDHL, Reuters, Bloomberg, etc) that may allow data sharing on secondary market activities.
  - However, the DMO is working towards the acquisition of a more robust security auctioning and trading platform that would not only interface with the CBN’s T24 but also with market operators and other stakeholders.
All DMO units have access to the debt database

- Front, and Middle Offices have read-only access, while the Back Office has write-and-read access to the system, with limitations at various security levels.

- External stakeholders like WAIFEM and The GIFMIS Project Office that have a web-link to the software and can only use DMO data through file export by the DMO.

- (WAIFEM is a licensed training site for CS-DRMS)
...and there is close control of operational risk generated by the system

- **IT support** is provided by the IT-IS unit of the DMO on an on-going basis and where necessary, in collaboration with the Commonwealth Secretariat.
- **Disaster Recovery Site:** The DMO maintains an offsite back-up facility for CS-DRMS
- **Codes and Procedures:**
  - Code of conduct for IT practices (no external disk in the computer system, Anti virus and Password management and support etc)
  - Procedures manuals for debt recording and validation
  - Procedures for access to the debt recording system and audit trails
  - Business continuity plan etc.
- **Upgrade Plans:** There are continuous upgrade and improvements on the current ICT infrastructure based on the reports of the ICT standardization assessment which was conducted in 2010 to benchmark the DMO’s ICT services/support using the ITIL framework.
Nigeria’s DMO has critical Risk Management Responsibilities

• The debt management office monitors the risk of the government debt portfolio and prepare a debt management strategy
  – Risk monitoring and management is done in the MO by the Statistics, Analysis and RM Unit.
  – Weekly and Quarterly reports which analyse interest rate and refinancing risks using the MTDS Template are generated by the Unit for management information and action
  – Preparation of Debt Strategy started in 2008 with the National Debt Management Framework (NDMF) which has been published and posted on the web
  – MTDS was completed in 2011 and is currently under going approval process before publishing
..and these are supported by the debt recording and management system

- The debt management system has modules that assist the Middle Office in the risk management and strategy preparation tasks
- Management tool: for analysing the sensitivity of the debt portfolio to changes in interest rates, exchange rates, (such as portfolio duration) and other key macroeconomic variables (such as inflation), for analysing index-linked bonds

- Reporting facility: It allows users the flexibility to modify existing reports or create customised reports.

- Risk management data on average yield, redemption profile, interest rate type, and average residual maturity can be generated by the system
Cost and risk analysis is performed in separate Excel spreadsheets

- Data Export Link: This module allows the transfer of data to the MTDS and other third party tools
  » Also to systems such as (DSM+), Debt Reporting System (DRS), DSF-LIC and Debt Pro

- Data aggregation and risk management reports are generated by Middle Office staff, on customised excel sheets and fed into the MTDS Template

- The customised data can then be easily manipulated in the MTDS Template
Major Strengths

– Ability to generate detailed reports on debt service forecast, debt stocks and flows, by economic and institutional sector, interest rate type, remaining maturity, cash and accrual basis of accounting, currency, by holder of securities, residence, domestic debt reports, etc.

– Facilitates debt service payments on a timely basis

– In-built facility for validating input data

– Use of the management tool module for external debt to analyse the sensitivity of the debt portfolio to changes in interest rates, exchange rates, and other key macroeconomic variables.
Major Constrains

• No provision for preparation of electronic payment orders

• The domestic debt module has limited available reports compared to the external module and has constrains in meeting country specifics

• Does not interface with any secondary market financial data provider for effective and timely portfolio analysis
Any Preferred IT System?

• Nigeria plans to keep CS-DRMS because it supports debt recording and settlement and the risk management and strategy preparation functions.

• For now, Nigeria will continue doing the cost and risk analysis in the MTDS tool until enough capacity is built to for developing an additional customised framework for executing similar functions in the DMO.
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