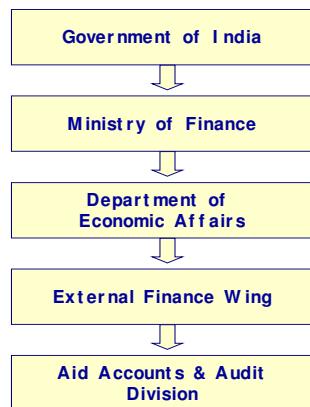


INSTITUTIONAL STRENGTHENING FOR BACK OFFICE OPERATIONS OF SOVEREIGN EXTERNAL DEBT MANAGEMENT AND E-BUSINESS INITIATIVES

1. The back office functions related with sovereign external debt management of Government of India (GOI) are handled by Aid Accounts and Audit Division (AAAD). The division works under the External Finance Wing of the Department of Economic Affairs under the Ministry of Finance.

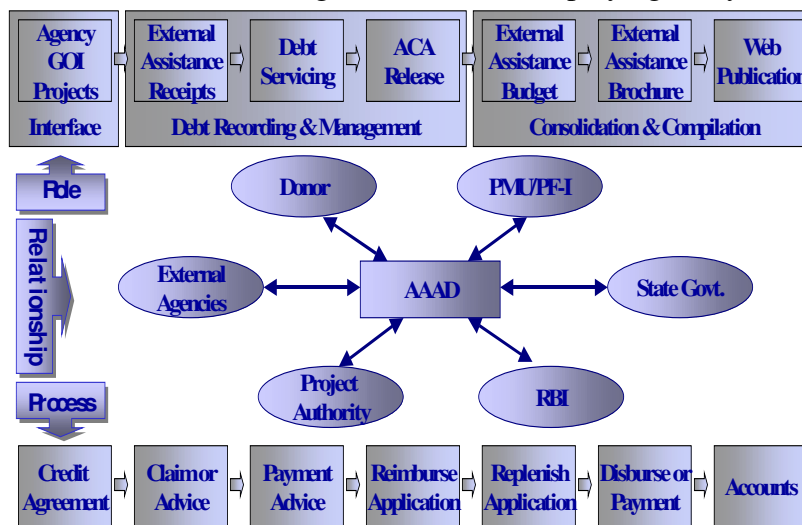


- > **Responsible for**
 - **Financial covenants of Government of India's (GOI) loans/grants/credit agreements with multilateral and bilateral agencies**
- > **Magnitude**
 - **US\$ 43 billion approx. (out of total external debt stock of approx. US\$ 95 billion)**

the Ministry of Finance. The Division plays a very vital role and is responsible for functions relating to the financial covenants of Grant and Credit Agreements concluded by GOI with various multilateral and bilateral agencies. Of the total external debt stock of over US\$ 95 billion, the external debt stock relating to sovereign external borrowings for which this Division is responsible is around US\$ 43 billion. The value of transactions handled by this

Division is around US\$ 6 billion. The AAAD handles funds in multiple currencies deployed in compliance with 1100+ active project agreements so as to comply with varied rules and procedures specified by around 20+ funding agencies.

2. The back-office functions related with sovereign external debt management performed by the Division include arranging for drawdown of loans/grants, timely discharge of debt service obligations, accounting of external assistance, providing MIS, framing of budget for external assistance etc. This requires interfacing with various stakeholders viz. GOI, Multilateral – Bilateral funding agencies, and Projects Implementing Agencies. In the recent past, the Division has also taken some initiatives towards active debt management and started playing a key role in assisting the Ministry of Finance in carrying out some of the middle office functions related with sovereign external debt management, like analysis of portfolio to identify high cost debts, preparing plans / analysing options for pre-payments, using new debt instruments offered by the agencies/financial institutions, market assessment of interest rate and currency related risks, framing debt policies etc.



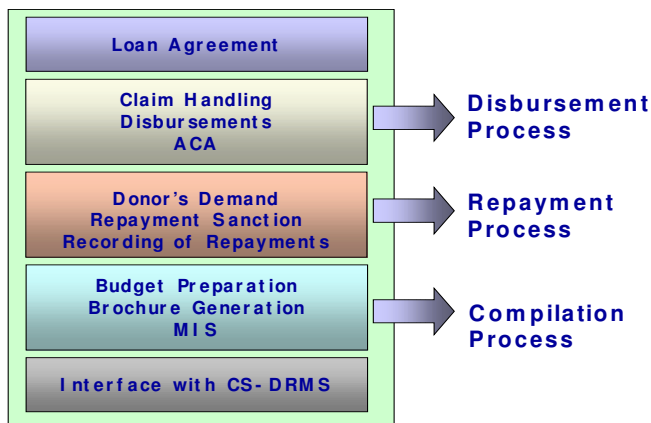
3. The operations handled by the Division are critical and the quantum of funds managed by the Division is huge, thus any improvement in the functioning of this Division has a significant

impact on the external debt operations of the country. Keeping this in view, the Division decided to go for a complete overhaul of the systems as opposed to the incremental improvement attempt made in the past. With this end objective in mind, the Division commissioned the services of A F Ferguson & Co. – a well known and leading professional consultancy firm – to help in strengthening the systems of AAAD in line with international best practices and building internal capacity of AAAD to work in a sophisticated computerised environment.

4. Instead of imitating practices developed elsewhere, the Division decided to automate the overall functioning by implementing a control and command fully automated system designed from scratch which tracks the entire external assistance cycle from the stage of signing of agreement till repayment of the last instalment.

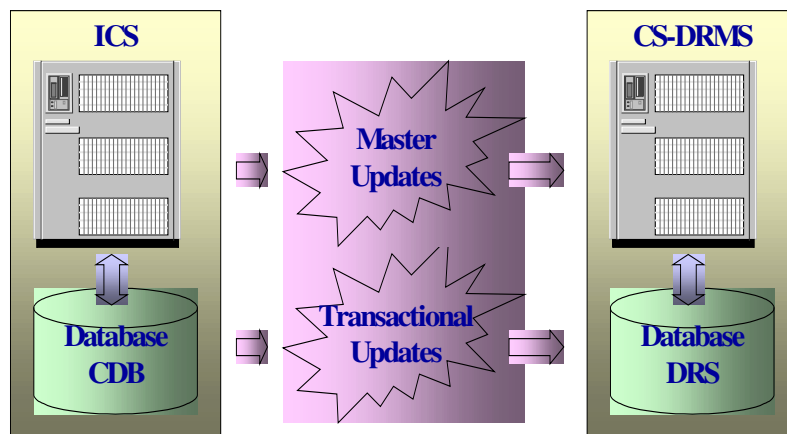
Back Office Sovereign External Debt Management System – ‘A Real Time and Online Integrated Computerised System’

5. The need for re-engineering and development of automation of the entire work processes was visualised by the Division in 1998 with a view to enhancing debt management capability.



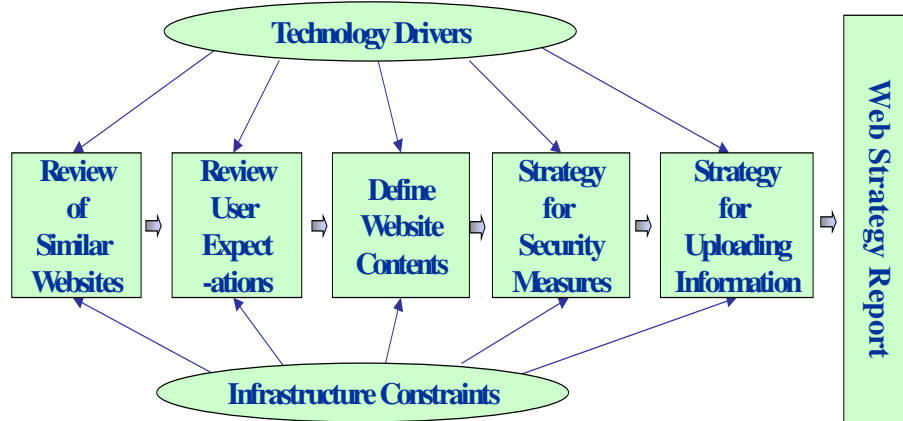
Initially a diagnostic study was carried out to confirm the feasibility of implementing such concept in India. The development of an on-line Integrated Computerised System (ICS) was started in mid 1999 in a phased manner. Depending on the priorities identified, the various modules were developed and implemented. Extensive training was given to all the users and the implementation was started in late 1999. The data maintained by the earlier systems were transferred into the new system.

6. The system provides a comprehensive real-time status of the external debt portfolio of GOI and maintains various ledgers, registers, subsidiary records etc. ICS captures various transactions in a real-time manner, which is also required by the CS-DRMS package for carrying out portfolio analysis. To avoid the duplication of data entry and ensuring that the database maintained by CS-DRMS package is up-to-date, an EDI link was developed, which transfers the basic debt related transactions from ICS to CS-DRMS package. This link ensures that the CS-DRMS database is always up-to-date and can provide more meaningful analysis of the portfolio.



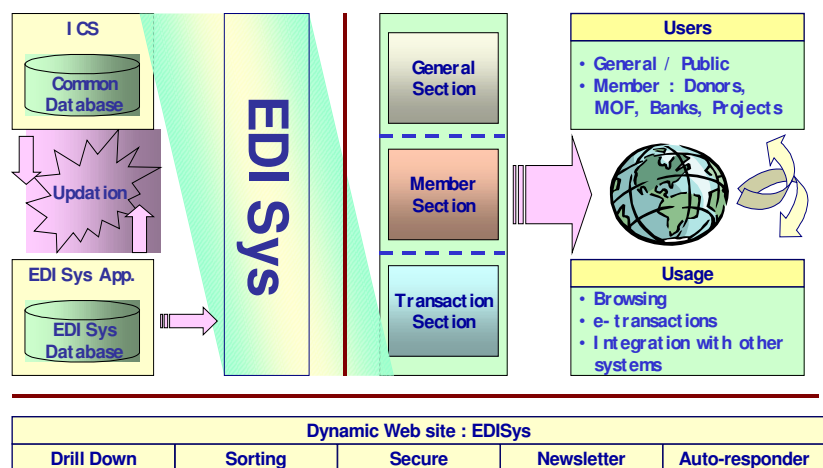
Web-Publication – ‘A Dynamic Web-site’

7. The debt information is periodically published on the web. Typically, the information published on this website relates to summary of disbursements and repayments related with external assistance taken by GOI on various permutation and combination. For this purpose, initially a comprehensive web strategy was developed keeping in view current and future needs / requirements of the department towards web-publication and e-business. The strategy proposed a website, which should be dynamic in nature and should be managed by a web application.



The information that is required to be published on this website should be maintained on a separate database. This database should be accessed by the web application in order to answer the queries of the web-site users. Since the website provides access to sensitive information related with the sovereign external debt portfolio on an on-line basis from the Integrated Computerised System, it was proposed that separate sections should be created for general users, member users and users who can participate in e-transactions with the department. Special hardware tokens are being used in order to establish the identity of the user and secured transfer of data.

8. The website has been designed and developed keeping in view the availability of bandwidth (which is generally low for most of the users), information expectations of various users (different users need to view the status of their own portfolio on number of permutations and combinations), facilities which are desirable by the users etc. The site has been conceptualised in such a way, that it should be compatible with the new initiatives proposed to be adopted by multilateral funding agencies like the World Bank and Asian Development Bank for establishing e-transactional network among the participating agencies. Special algorithms have been developed and new techniques have been evolved for developing this website. The website has the following interesting features:



- (1) minimising internet traffic, by restricting transfer of only compressed raw data to client machine rather than an HTML page
- (2) formatting compressed raw data using client's browser capabilities
- (3) presentation of information in TRUE TABLUR format (i.e. column headings remain fixed on vertical scrolling – the headings scroll along with the information on horizontal scrolling)
- (4) user defined sorting of information using client's browser capabilities (i.e. without requiring any internet connection/data transfer)
- (5) ability to handle user definable queries on several parameters
- (6) data exported to the SPREADSHEET format, can be used for further analysis
- (7) facility to print report header on each page.

Achievements

9. The institutional strengthening and complete transformation of the Division has been achieved in a record time without any additional internal resource and with a low level of investment. Improved fund management facilitated by the automation has already led to substantial financial savings. In addition to the normal back office functions, the Division is now equipped for adoption of sophisticated portfolio analysis techniques.

10. Development and successful implementation of these systems in India has received much deserved international recognition. The automated systems developed and implemented at AAAD have been rated as being superior to international standard back office tools for the management of sovereign external assistance portfolio by several delegations from multilateral / bilateral funding agencies and institutions that have visited the Division.

Building similar capabilities in other countries

11. Several countries have expressed interest in replicating the AAAD systems. During the discussions, it was indicated that building similar capabilities in other countries may involve around two calendar years and budgetary cost in the range of US\$ 3 million.

For further information, please contact:

<p>Mr A Saxena Group Head (IT) A F Ferguson & Co. 40, Basant Lok, Vasant Vihar New Delhi – 110 057 India Tel : +91.11.26141827, 26142931, 26142332 Fax : +91.11.26144786 E-Mail : asaxena@afferguson.com contact_alok@hotmail.com</p>	<p>Ms C Chawla Project Leader A F Ferguson & Co. 40, Basant Lok, Vasant Vihar New Delhi – 110 057 India Tel : +91.11.26141827, 26142931, 26142332 Fax : +91.11.26144786 E-Mail : cchawla@afferguson.com chetna_chawla@hotmail.com</p>
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