



DMFASINFO



THE NEWSLETTER OF THE PROGRAMME ON DEBT MANAGEMENT AND FINANCIAL ANALYSIS SYSTEM

> Editorial

Capacity building in debt management has received a lot of attention over the last few years, as evidenced by various resolutions of the United Nations General Assembly and by the Monterrey Consensus. However, building capacity in sovereign debt management can take several years and country situations vary widely. So how can we best give this capacity building a practical form? What if we have a debt management pyramid (see article) - where the mastery of each layer leads to a better grasp of the overall debt management reality and needs of a country in helping it make debt sustainable? And what role DMFAS can play in all this? As just part of that role, the programme is now in the process of designing a comprehensive training curriculum in debt management, which should be incorporated within the respective phases of each country project, as framed by the pyramid concept. Taking into account the best in debt management standards and practices, the first module of this curriculum is on data validation and will be made available to DMFAS users later this year. Also, in May, after a signing ceremony at the World Bank in Washington, the DMFAS programme officially became co-owner of the World Bank's Debt Sustainability Model Plus (DSM+). The software is one of the few tools available today to assist in the development of debt strategies and the conducting of debt sustainability analysis. We invite you to read about this new agreement, the pyramid concept, training and other DMFAS capacity-building activities.

Ultimately, capacity building should result in better and more efficient borrowing policies. In this connection, Mr. Deredza of the Macroeconomic and Financial Management Institute of Eastern and Southern Africa (MEFMI) looks at how, by carefully determining, *ex ante*, the conditions, character and size of individual loans entering a sovereign external debt portfolio, a policy framework can be established. This framework can then serve as a base for developing preventive strategies in order to avoid rapid and/or unsustainable debt accumulation and debt defaults.

This newsletter will also tell you about the latest maintenance version of the DMFAS, called 5.2.0.50, and users are encouraged to upgrade to it in order to benefit from the bug fixes and enhancements it contains and in order to facilitate system and helpdesk maintenance.

Installing DMFAS 5.2.0.50 will also greatly facilitate upgrade to version 5.3, which will be released at the end of this year.

Finally, we wish to take this opportunity to draw your attention to the Fourth Inter-regional Debt Management Conference as well as to the next DMFAS Advisory Group meeting, both of which will take place in Geneva in November 2003.

We wish you enjoyable reading.

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> > DMFAS HIGHLIGHTS

> DMFAS version 5.2.0.50

What is DMFAS 5.2.0.50 ?

DMFAS 5.2.0.50 is the latest maintenance version of the DMFAS system and it incorporates a good number of bug fixes as well as system enhancements. These include the previously released euro conversion module, new grant and loan totals, new programs compatible with Windows 2000 and XP, and solutions to problems in the Debtor Reporting System (DRS) module.

DMFAS users are encouraged to upgrade to this version, which came out in March 2003, in order to benefit from these bug fixes and enhancements, to facilitate system and helpdesk maintenance, and also to prepare themselves for the next major version, DMFAS 5.3, scheduled to be released at the end of this year.

What are the technical requirements to run DMFAS 5.2.0.50 ?

5.2.0.50 runs on the Oracle database versions 7.3.4, 8.0.5, 8.1.5i, 8.1.6i, 8.1.7i and 9i.

It operates on client platforms using Windows 95/98/NT, 2000 and XP. However, installation on Windows XP is not recommended as Oracle does not yet certify Windows XP on its database versions 7.3.4 to 8.1.7i, or on its Oracle 9i client server.

For Windows 95/98/NT, Oracle Developer Tools 1.6 is used to run forms and reports. For Windows 2000/XP, the required compatible tools are those of Oracle Developer Tools 1.6.1 plus patch 15. The old Browser 2.0 of Discoverer Tools will still be used for all client platforms.

How will version 5.2.0.50 be installed ?

DMFAS 5.2.0.50 is available for distribution on CD-Rom. For workstations using Windows 2000, a CD-Rom containing Developer Tools 1.6.1 (plus patch 15) is also provided.

For workstations using Windows 95/98/NT, there is no need to install new Oracle tools as the old Developer Tools 1.6 still applies.

Installation of 5.2.0.50 can be performed by the local database administrator, given that no new specific technical or operational training is required in order to implement this update. Instructions are provided by the DMFAS helpdesk.

How can version 5.2.0.50 be obtained ?

The software can be obtained in various ways:

- Over the Internet - by downloading the DMFAS 5.2.0.50 software and installation instructions from the UNCTAD FTP server;
- By mail - two CDs (DMFAS 5.2.0.50 and Developer Tools 1.6.1); and
- By e-mail.

For further information, please contact the DMFAS Helpdesk on e-mail dmfas@unctad.org, or tel: + 41 22 907 5924

> The DMFAS pyramid and capacity building in debt management

In order to best visualize capacity building in debt management, the DMFAS programme proposes the concept of a debt management pyramid – where the mastery of each layer leads to a better grasp of the overall debt management reality and needs of a country in helping it make debt sustainable.

There are three layers to this pyramid, which are the building blocks towards strategy and policy-making. In order to develop a debt *strategy*, represented at the pyramid apex, one has to first establish a debt database, produce relevant statistics and, finally, undertake relevant analysis.



The cornerstones, which are visible at its base, are *structure*, *staffing* and *systems*. They provide the foundations on which capacity in debt management is built and it is through their optimization that the pyramid will find its strength and stability. We can add the fourth, but hidden, cornerstone, namely the *support* given by the DMFAS programme.

Of course, building capacity in sovereign debt management can take several years and country situations vary widely. It is shaped by the type of financing available to the Government, the exchange rate regime, the quality of the macroeconomic and regulatory policies, the overall institutional capacity, the country's credit standing and its objectives for public debt management. Thus, there cannot be a set of binding practices or mandatory standards or codes.

The role of the DMFAS programme has always been to provide a standard system to debt offices. Implementation of the system in the country, however, is specific to each country project and is part of the wider efforts of the programme. It is important to emphasize that the pyramid can be built in different ways. However, it will need the cornerstones and the building blocks referred to in order for it to be built effectively.

> Training and DMFAS capacity building

As the number of DMFAS projects grows, the need for a consistent methodology for providing training to the different institutions and countries using the DMFAS software has become increasingly evident. This does not imply that all institutions need the same training, but the objective is rather to ensure that when a specific topic is covered, it is covered in the same way in all countries and according to best agreed practices and standards in public debt management.

Early last year, therefore, the DMFAS programme decided to embark on an exercise aimed at defining and developing a comprehensive training curriculum that would take this objective into account. Although the curriculum is primarily intended for use by DMFAS consultants in their training, the end beneficiaries of this curriculum will of course be government employees and others who manage their countries' national debt portfolios.



Participants attending the data validation and the Training for Trainers workshops, 4–15 november 2002, Geneva, Switzerland

To design the curriculum, the DMFAS programme requested the assistance of UNCTAD's TrainforTrade programme.

The latter's methodology has a major strength in that it aims at producing standardized material, by which the quality of delivery is ensured and is consistent throughout the training network. Courses produced are material-dependent, as opposed to instructor- or consultant-dependent. According to the need of each debt office, the modular training package can be adapted to suit local conditions.

During the first step in designing the training curriculum in debt management, the following common functions of a debt officer were identified:

- Function 1 - To contract debt obligations
- Function 2 - To administer public debt operations (Procedures)
- Function 3 - To record debt instruments and operations (accounting and use of DMFAS)
- Function 4 - To produce reports
- Function 5 - To analyse aggregated data

Each function has since been broken down into tasks, details of which will serve as the basis for the development of the training material. Each task breakdown also takes into account the corresponding skills, knowledge and attitudes required by a debt officer in order to carry out the task satisfactorily.

Keeping in mind the pyramid concept (see the previous article), where a high-quality database is a necessary foundation for reliable debt statistics and analysis, the DMFAS programme decided that the most urgent training need to be addressed was in the area of debt data validation, in response to the need of many of its user countries to address data inconsistencies.

Debt data validation thus became the focus of the first training module. For this, a generic checklist for the

validation of information contained in debt databases was elaborated and relative performance criteria were proposed. The checklist was subsequently validated by a group of approximately 25 DMFAS consultants and selected representatives of Governments using DMFAS, as well as staff from TrainforTrade and the Geneva-based DMFAS team, at a workshop held in Geneva from 4 to 8 November 2002. The

participants defined the final contents for the data validation course, which will be finalized later this year, before being implemented throughout the DMFAS network.

In support of the checklist, a participants' and a trainers' handbook on debt data validation have also been drafted and are now being finalized for testing.

> Training for Trainers workshop

Following the data validation workshop, the same participants were invited to a second workshop, held from 11 to 15 November, dedicated to training pedagogy and organized by the United Nations' staff development and learning section. Working with training "coaches", DMFAS existing and new trainers were able to assess their current training skills and techniques, provide feedback to one another and learn from a spectrum of additional and alternative training methods. The workshop looked at ways of identifying real training needs, evaluating trainee understanding, and improving presentation and group facilitation skills, as well as at how adults learn and interact (group dynamics).

> Data reconciliation: Comparison report for outstanding balances

Reconciliation of debt information produced by DMFAS with information from the creditors is a way to test the quality of the information contained in the system.

> > DMFAS HIGHLIGHTS

The objective of reconciliation, which is often applied in private sector accounting, is to confirm the account balances of the company with those of its bank connections, its customers and its suppliers, to explain possible differences and to make any necessary corrections in the case of inconsistencies. In the public sector, its objective is exactly the same.

This requires that a comparison report be made at least once a year at the end of the budget period. For this, the national debt office must ask each of its creditors for a statement showing all outstanding balances on a loan-by-loan basis at the end of the budget period, as well as the principal and interest payments during the budget period, and the stock of arrears of interest and principal at the end of the period.

In order to produce a reconciliation comparison report with the DMFAS system:

1. For each creditor, create a user-defined-report using report format 1. Using the field "Creditor Reference" in order to facilitate the reconciliation of this information with that provided by each creditor, each report should produce a debt total called "Outstanding Incl. Arrears Total".
2. Recover this file with Excel using the interface provided by the DMFAS programme for this purpose.
3. In Excel, create a new column called, for example, "Outstanding as Reported by the Creditor".
4. Next to the new column create a second one called "Difference". The contents of this will be the "Outstanding as Reported by the Creditor" minus "Outstanding Incl. Arrears Total".

This will produce a report looking like figure 1:

Figure 1 Comparison report

Control Report for outstanding on ADB loans as of 31 december 2001							
Loan N°	Tr.	curr.	Creditor reference		Outstanding Incl. Arrears Total at 31/12/01	Outstanding Reported by the Creditor	Difference
TEST_2001	1	USD	TEST_2001	USD	560,333.33	560,333.33	0.00
Y2K_JM4	1	USD	TEST	USD	-769,230.80	125,000.00	894,230.80
20002000	1	AFU	-003	AFU	-45,553.26	25,000.00	70,553.26
20004000	1	AFU	CS UG AGR 74004	AFU	117,616.33	117,617.00	0.67
20007000	1	AFU	CS UG AGR 74006	AFU	93,000.00	93,000.00	0.00

This method permits the user to work only with those loans that show a difference between the amounts recorded in DMFAS and those reported by the creditor. In the above example, it can be seen that there are errors in the data. This is due to loans with negative outstanding, probably caused by real drawings that were not entered into the system.

It may happen that the outstanding as reported by the debtor is correct, but in spite of this different from that reported by the creditor. This can occur if a payment is made by the debtor at the very end of a budget period, and thus at the date of producing the statement, the payment has not yet reached – or been registered by – the creditor. From the debtor's point of view, the outstanding is correct and the difference with the creditor is justified. Nevertheless, in such cases it would be appropriate to insert a footnote explaining the difference.

A normal auditing practice would be to first circulate the information to all parties concerned for their observations, and then on the basis of their feedback establish a control report. In the area of debt, the debt manager would send the position of each respective loan as recorded by the debt office to each creditor and ask the creditor to verify the information. Some creditors also proceed in this way because their auditors ask them to verify the information with the debtor.

> INTOSAI workshop on auditing debt offices

At the beginning of the year, the DMFAS programme participated in the final preparatory phase of a seminar/workshop entitled "Auditing Debt Management Offices – Training for trainers", which was organized by the International Organization of Supreme Audit Institutions (INTOSAI) in Mexico in May. The objective of the workshop was to train in auditing and debt management auditors from Latin American debt offices who could then train others.

The preparatory meeting, which took place from 24 to 28 February, was hosted by the Auditor General's Office of Panama and followed up on a previous brainstorming meeting held in Ottawa in November 2002. Its main purpose was to decide on the detailed agenda for the five-week May workshop as well as on the profile of the workshop's participants, selected from the 12 INTOSAI member countries.

At this meeting, it was decided that the workshop would be structured into three parts: the first would look at adult learning techniques, the second would be an intensive

course in debt management and the third would concentrate on the actual drafting of the training material.

Its participants comprised nine subject-matter specialists from the Auditor General's offices of Mexico, Panama, the United States, Uruguay and Venezuela, from the World Bank and UNCTAD, as well as a moderator/rapporteur from INTOSAI Development Initiative (IDI). Relevant themes in debt management were suggested and explained by the World Bank and UNCTAD, while the auditors and adult learning experts analysed their suitability for the workshop. Representatives from Panama's debt office also provided important inputs.

The final course material will be adapted, translated and delivered to national auditing offices throughout the INTOSAI network worldwide.

> Integrated system in Bolivia¹

Bolivia has successfully implemented several consecutive projects aimed at the computerization of its public financial management. The different institutions taking part in the debt management process are involved at specific stages, such as negotiation, authorization, registration, payment and the production of debt statistics, and have the following roles/functions:

- The Ministry of Finance, the General Public Debt Office and the Vice Ministry of Public Investment and External Finance are the institutions responsible for contracting new debt.
- The Central Bank of Bolivia carries out the registration of the public (as well as private) external debt, receipt of drawings and payment. Moreover, it participates in debt renegotiations together with the Ministry of Finance. It is also the institution that produces debt statistics. The Bank has used the DMFAS system for public debt registration since 1995 and possesses a complete public external debt database. In 1999, it initiated a project to obtain the required data for the registration of private external debt, through direct contact and through the use of forms to be filled in by the indebted private organizations. It is estimated that nearly 90 per cent of private external debt is covered in the database. This stock amounts to 45 per cent of the total national debt.
- The External Debt Committee (CODEX) is composed of delegates from the Ministry of Finance and the Central Bank. Created in 1996, it is the institution that coordinates and defines the country's policies of external indebtedness and debt renegotiation.

Since 1991, the Ministry of Finance has executed different projects to implement an Integrated Financial Administration System. In 1999, it initiated the Integrated Management and Administrative Modernization System (SIGMA) project, which manages the integration of the Government's Treasury, Budget and Accounting systems.

In 2000, the Ministry and UNCTAD signed a country project agreement for the implementation of DMFAS in the Ministry. The project also catered for the creation of a link from DMFAS to SIGMA, as well as for the adaptation of the former to allow it to also handle public domestic debt. This project concluded in 2002 with the implementation of a new module in DMFAS for managing bonds.

Overall, Bolivia has reached an advanced stage in its automatization process and the following results have been obtained so far:

- Reliable and timely information on external public debt in the DMFAS with data starting on 31 December 1995;
- A DMFAS database that allows optimal results during the



Mr. Ochoa, Mr. Espinoza and Mr. Cosío Pascal at the Advisory Group Meeting in Geneva, September 2002

different debt renegotiations in the context of the Heavily Indebted Poor Countries (HIPC) Initiative and in the Paris Club;

- A database in the Ministry of Finance that permits the implementation of the link with SIGMA;
 - The registration of private external debt in DMFAS;
 - Timely and reliable monthly generation of total external debt information;
 - As a consequence of the SIGMA project, the integration of the subsystems of Budget, Treasury and Accounting have been applied at the National Government level and in the other 25 organizations of the public sector since 2001.

These results have furthermore allowed the planning of the following future activities:

- The elaboration of strategies using the DSM+;
- The finalization of the total integration between DMFAS and SIGMA;
- The inclusion of all domestic debt in the DMFAS database;
- The inclusion of debt transactions of local governments and other institutions into the integrated system.

> New project in Viet Nam

One of the most ambitious debt management technical cooperation projects ever implemented by the DMFAS programme is now underway in Viet Nam. It is also the first DMFAS country project to be carried out with a private sector agency – in this case, the Crown Agents, a London-based international development company.

The project follows the success of the previous three-year institutional-building project in Viet Nam also managed by the DMFAS programme. The new three-and-a-half year, \$2.3 million project, financed by the United Nations Development Programme and the Governments of Australia and Switzerland, will address capacity building in all the functional areas of debt management and at all governmental levels within the country.

It aims to help the Government build its debt management capacity and to consequently achieve sustainable development and minimize the risk of financial crises. Its objectives are to strengthen the country's legal and institutional debt management framework; to help the country build its capacity to undertake a sustainable external debt policy; to incorporate debt management within the Government's fiscal framework; to improve the information flow of external debt data among concerned users; and to develop human capacity in reaching these objectives - an intrinsic part of the project.

The Crown Agents will be responsible for those capacity-building blocks dealing with institutional, legal, fiscal, debt

¹ This article is an extract from a presentation to the DMFAS Advisory Group meeting in September 2002 made by Mr. David Espinoza, Director of International Operations of the Central Bank of Bolivia, and Mr. Rolando Ochoa, DMFAS Administrator of the Bank.

> > COUNTRY FOCUS

strategy and sustainability issues. The DMFAS programme, which played an important role in the elaboration and preparatory work of the project, including the development of a comprehensive monitoring and evaluation system, will be responsible for reinforcing the Government's operational capacity to generate, monitor, report on and analyse its external debt.

Owing to its complexity, structure and ambition, the project requires close coordination by the two co-implementing agencies, the three donors and the numerous government target entities. To this end, the UNDP and the Government have created a solid project management unit, which is located in the Ministry of Finance – the main executing government agency. It has also set up a comprehensive governmental coordination mechanism, partly based on the work performed by six governmental working groups, whose tasks are to oversee and implement the different objectives of the project.

> Projects update

Since the last newsletter (December 2002), UNCTAD has signed new technical cooperation project documents with the following countries/institutions:

- > **Chile.** The Central Bank of Chile signed a project document last December with UNCTAD on the implementation of DMFAS and its adaptation to manage syndicated loans. Chile is a new DMFAS country.
- > **Djibouti.** A new project, which aims at strengthening the Ministry of Finance's capacity to manage the country's external debt through the installation of DMFAS version 5.2 and training in its use, began in January. It is funded by a World Bank grant.
- > **Panama.** A follow-up project started in January, with the objective of implementing DMFAS 5.3 in the Ministry of Economy and Finance. The project is financing the further development of the bonds module and the adaptation of the SIAFPA² link, and provides for a training component on data validation and debt analysis.
- > **Trinidad and Tobago.** In February, UNCTAD signed a project document with the Ministry of Finance, which will become a new DMFAS user institution. The Central Bank has used DMFAS since 1985.
- > **Uganda.** In April, a project document was signed with the Ministry of Finance of Uganda for the re-installation of DMFAS 5.2 after the original installation had been completely lost in a storm. Work will start in June 2003.
- > **Yemen.** At the end of 2002, the existing project was re-phased to give focus to the linking of the DMFAS installation between the Central Bank, the Ministry of Finance and the Ministry of Planning and Development.

² SIAFPA is Panama's Integrated Financial Administration System. It is currently being reviewed to take into account the ongoing restructuring of the Ministry of Economy and the future implementation of DMFAS version 5.3.

> DSM+ update

On 29 May 2003, after a signing ceremony at the World Bank in Washington, the DMFAS programme officially became co-owner of the World Bank's Debt Sustainability Model, DSM+. This software is one of the few tools available today for the development of debt strategies and for the conducting of debt sustainability analysis. On the basis of relevant debt extracted from DMFAS and of selected macroeconomic indicators, DSM+ allows users to develop debt strategies aimed at obtaining debt relief of either stocks or flows (in the form of rescheduling, forgiveness, debt conversions, buybacks or other modalities). By applying different scenarios, the software also facilitates the incorporation of new borrowing and gap filling operations in order to close the external financing gap and to achieve and maintain sustainable debt levels.

This co-ownership agreement amends the original partnership agreement with the World Bank and the Commonwealth Secretariat signed in 1998, which outlined the modalities for further development and dissemination of the DSM+ software, and strengthens the position of the DMFAS programme.



Signing of the World Bank/UNCTAD co-ownership agreement on DSM+ by the World Bank's International Economics Department and UNCTAD's DMFAS programme. Left to right : (Back) Mr. Teeling, Ms Chuhan, Mr. Archondo, Mr. Mandlekar, Mr. Borresen, Mr. Walker, Mr. Farivari; (Front) Mr. Straatman, Ms Baidee.

The World Bank has also recently started the programming of a functionality to incorporate fiscal information into DSM+. This new feature will help in the calculation of the internal financial requirements and the fiscal gap.

With the increasing number of DMFAS countries requesting assistance and training in analytical work, training in debt strategy development and in the use of DSM+ is being consolidated as an important component of the capacity-building efforts of the DMFAS programme. This capacity building, however, is a long-term undertaking as it often requires the debt office to make concrete changes and improvements to its structural and functional organization, as well as to its staffing – in order to incorporate analytical units more specifically dedicated to this area of work.

Before any analytical work on debt strategy can be scheduled, the programme tries to help countries strengthen their basic skills in conceptual stocks and flows analysis as well as debt portfolio evaluation.

Over the last year, in response to training requests from its user countries, the DMFAS programme has organized workshops in the debt offices of the Central Bank of Syria, the Ministry of Finance of Mongolia, the Central Bank of Angola and the Ministry of Finance of Togo. Two training workshops on DSM+ were also organized in Geneva, for delegations from the debt office of Chad and from the Central Bank of Lebanon. DSM+ training activities were also included in the elaboration of project documents for the Dominican Republic, Indonesia, Togo, Viet Nam and Yemen.

The new co-ownership relationship strengthens the position of the DMFAS programme vis-à-vis its partner institutions, as well as its overall capacity-building initiative on debt analysis.

Note: A new CD has been produced for installing DSM+ in the English, French and Spanish versions of DMFAS. A User Guide and Training Guide for DSM+ have also been published in English, French and Spanish.

For more information, please contact your DMFAS project manager.

TECHNICAL CORNER < <

> Preventing and troubleshooting problems with space

A DMFAS database administrator needs to know how to prevent disruptions to users that are caused by space problems in the DMFAS database. This article provides an outline of the basic steps to follow in order to identify, solve and prevent possible problems that are caused by the lack of assigned physical space. For more detailed information, please see Oracle *SQL Reference Guide* and chapter 1 of Oracle's *Server Concepts Manual*.

1. Show location of datafiles and the current physical space allocated

For a detailed list of the Tablespaces' datafiles, execute script *DMS_FILE.SQL* (located in X:\DMFAS52\ADMIN\ADHOC). See figure 2, which is an extract from the log file *DMS_FILE.LOG*, generated by the execution of the script.

2. Check information about allocated and free space

After reviewing the extract, identify the size and datafile locations of the *Tablespace*, and execute two scripts (located in X:\DMFAS52\ADMIN\ADHOC), connecting as user name: *System*. The first is *FREE.SQL*, which gives a summary list of free space per *Tablespace* (see figure 3) and the second is *SPACE.SQL*, which provides additional information, including Percentage Free, based on allocated space (column *PCT_FREE* shown in figure 4). Then, check the information about allocated space and free space to see if any of the *Tablespaces* reach their maximum size. As a guideline, the recommended policy is to have 20 to 30 per cent of the allocated space free in order to satisfy future demand.

```
REPORT RUN: 19 November 02:25

Tablespace files:
=====
```

FILE_NAME	TABLESPACE_NAME	BYTES
F:\ORADATA\DM51\DM501TS.ORA	DMFAS	136,314,880
F:\ORADATA\DM51\DM501XS.ORA	DMFASINX	136,314,880
F:\ORADATA\DM51\REF01TS.ORA	DMFASREF	20,971,520
F:\ORADATA\DM51\ROLL01TS.ORA	ROLLBACK_DATA	136,314,880
F:\ORADATA\DM51\SYS01TS.ORA	SYSTEM	146,800,640
F:\ORADATA\DM51\TEMP01TS.ORA	TEMPORARY_DATA	125,829,120
F:\ORADATA\DM51\TOOL01TS.ORA	TOOLS	10,485,760
F:\ORADATA\DM51\USER01TS.ORA	USER_DATA	10,485,760
F:\ORADATA\DM51\WRK01TS.ORA	DMFASWRK	167,772,160
F:\ORADATA\DM51\WRK01XS.ORA	DMFASWRKINX	167,772,160

10 rows selected

Figure 2: Extract of dms_file.log

	FREE_BLOCKS	
DMFAS	19324928	2359
DMFASINX	54288384	6627
DMFASREF	10747904	1312
DMFASWRK	111132672	13566
DMFASWRKINX	98213888	11989
ROLLBACK_DATA	83058688	10139
SYSTEM	28065792	3426
TEMPORARY_DATA	125820928	15359
TOOL	5070848	619
USER_DATA	10477568	1279

10 rows selected

Figure 3 Output generated by FREE.SQL

TABLESPACE_NAME	LARGEST_FREE_CHUNK	NR_FREE_CHUNKS	SUM_ALLOC_BLOCKS	SUM_FREE_BLOCKS	PCT_FRE
DMFAS	2359	1	4160	2359	14.18%
DMFASINX	6421	9	16640	6627	39.83%
DMFASREF	1312	1	2560	1312	51.25%
DMFASWRK	13566	1	20480	13566	66.24%
DMFASWRKINX	11729	3	20480	11989	58.54%
ROLLBACK_DATA	9359	4	16640	10139	60.93%
SYSTEM	3426	1	17920	3426	19.12%
TEMPORARY_DATA	12114	60	15360	15359	99.99%
TOOLS	619	1	1280	619	48.36%
USER_DATA	1279	1	1280	1279	99.92%

10 rows selected.

Figure 4 Output generated by SPACE.SQL

3. Choose optimal solution corresponding to problem identified

A decision on the optimal solution needs to be taken, depending on each problem identified, i.e. the reason for the lack of space. The most common situations are illustrated in the following two case scenarios:

Case A: Where a large amount of data are entered on a daily basis.

A possible solution here would involve automating datafile extensions using the following syntax:

```
ALTER DATABASE DATAFILE 'datafile_filename'
AUTOEXTEND ON NEXT integer [K | M] MAXSIZE integer [K | M];
```

This command, using the *Autoextend* clause, enables (or disables) the automatic extension of a datafile.

For example (to enable):

```
ALTER DATABASE DATAFILE 'f:\oradata\dms1\dms01ts.ora'
AUTOEXTEND ON NEXT 20M MAXSIZE 300M;
```

The above statement tells the database to automatically create a new extent of 20 megabytes every time its preceding extent is full, up to the specified maximum of 300 megabytes.

To disable specify OFF. For example:

```
ALTER DATABASE DATAFILE 'f:\oradata\dms1\dms01ts.ora'
AUTOEXTEND OFF
```

Using the *Autoextend* clause for *Rollback* or *Temporary Tablespaces* may significantly increase the size of the datafiles. The space allocated will be internally released in the database, but the related datafiles will remain the same size as increased during the process. They will have to be resized manually to release space on the disk (see below).

Case B: Where a large amount of data are transferred on a one-time basis.

As this will need an increase in the size of the *Tablespaces*, it is necessary to ensure that there is enough free space for the new data. There are two options for this:

- (i) Use the *Autoextend* clause (see case B above); or
- (ii) Extend the datafiles manually on the basis of the known required space.

Resizing datafiles manually

The *Alter Database* command using the *Datafile* clause with the *Resize* parameter will allow the datafile to be increased or decreased, using the following syntax:

```
ALTER DATABASE DATAFILE 'datafile_filename' RESIZE
integer [K | M];
```

For example, to resize a datafile of the tablespace DMFAS:

```
ALTER DATABASE DATAFILE
'f:\oradata\dms1\dms01ts.ora'
RESIZE 160M;
```

The command above resizes the datafile dms01ts.ora from its current size of 130M to 160M.

If space where the datafiles are located in the hard disk is running out, use another datafile in a different hard disk with the *Alter Tablespace* statement and the following syntax:

```
ALTER TABLESPACE tablespace_name
ADD DATAFILE 'datafile_filename' SIZE integer [K | M];
```

This adds to the tablespace *tablespace_name* a datafile specified by *datafile_filename*. A datafile to a locally managed on-line tablespace can be added. Be sure that the file is not being used by another database.

Adding another datafile in a different hard disk to the tablespace DMFAS:

```
ALTER TABLESPACE dmfas
ADD DATAFILE 'g:\oradata\dms1\dms02ts.ora' SIZE 30M;
```

> Frequently Asked Questions in DMFAS

1. Question: Is DMFAS 5.2 certified to run on Windows 2000?

Answer: Yes. The necessary software is available upon request from the DMFAS helpdesk. The software includes new DMFAS 5.2 programs and the Developer Tools version 1.6.1.

2. Question: Is DMFAS 5.2 certified for Windows XP?

Answer: While our initial tests indicate that DMFAS 5.2 can run on Windows XP, we would not recommend the installation of the system in this platform. The primary reason is that Oracle itself cannot certify Oracle 7.3.4, 8.05i, 8.1.5i, 8.1.6i, 8.1.7i and 9i (client server) for Windows XP.

3. Question: Where can I locate the text file generated from user-defined reports, DSM Plus, and World Bank forms 1 and 2?

Answer: The text file from user-defined reports, DSM+ and World Bank forms 1 and 2 is created on the server in a directory defined in the UTL_FILE_DIR parameter of the Oracle initialization file, INIT.ORA (e.g. directory D:\PROGRAMS\ASCII). From a workstation, the text file may be found in p:\ASCII, since the server directory D:\PROGRAMS\ is normally mapped to drive p:.

4. Question: What is the message 'ORA-20000 PL/SQL unhandled exception error' when updating the user-defined report table?

Answer: The ORA-20000 error message is caused by the existence of duplicate main participants (creditors, debtors, beneficiaries) for a loan or duplicate economic sectors for a tranche. To fix the problem, the DBA can do the following:

1. Obtain more detailed error messages by updating the user-defined report table directly from SQLPlus:
Connect dmfas
@p:\dmfas52\admin\create\objects\package\dbpack\debug\do_12_9.sql
2. From SQLPlus, list down the loans with duplicate main participants and economic sectors:
Connect dmfas
@p:\dmfas52\admin\maintain\mult_pa.sql
@p:\dmfas52\admin\maintain\mult_eco.sql
3. Delete multiple participants by following the documents, MULT_PA.DOC (English version) and MULT_PA_SPA.DOC (Spanish version), which are available in directory p:\dmfas52\admin\maintain\.

For answers to other frequently asked questions, check the DMFAS website www.unctad.org/dmfas or e-mail dmfas@unctad.org or telephone + 41 22 907 6291.

ECONOMIC FOCUS < <

> CONCEPTUAL ISSUES IN FORMULATING AN EXTERNAL BORROWING POLICY FRAMEWORK

By: Cornilious M. Deredza³

To date, the importance attached to preventive strategies has not been anywhere near that devoted to ameliorating the existing debt burdens of developing countries. Priority has had to be given to "fire-fighting" the "burning" debt burden, to the detriment of its prevention. The current promising debt reduction measures must now be paired with an equal emphasis on, and attention to, preventive public borrowing strategies. This article, which is an abridged version of a substantive paper on the subject, discusses some of the conceptual issues that need to be taken into account when formulating a policy framework for external borrowing. With some adaptation, the ideas herein could also be applied to public domestic borrowing.

RATIONALE

A country's borrowing policy is an important endogenous and dynamic determinant of the profile and magnitude of its external indebtedness, which ultimately impacts on the character of its international relations. By carefully determining, ex ante, the conditions, character and size of individual loans entering a sovereign external debt portfolio, having a country's borrowing policy framework can serve as a base for developing preventive strategies in order to avoid rapid and/or unsustainable debt accumulation and debt defaults.

³ The author is Debt Management Program Officer at the Macroeconomic and Financial Management Institute of Eastern and Southern Africa (MEFMI) and former Regional Technical Officer (UNCTAD) in ESAIDARM, MEFMI's predecessor. He was also Regional Representative of the DMFAS Club for Anglophone Africa. MEFMI is a ten-member State regional capacity-building institute, which focuses on building capacity and fostering best practices in macroeconomic, financial sector and debt management.

The framework could be structured to follow the order of the "borrowing cycle", i.e. from the first stage of determining a country's external financing requirements to the final stage of accessing the loan proceeds. Actions and decisions taken at each stage would be guided by predetermined criteria, which should be based on broad national participatory consultation and be adapted to best international practices.

Such a framework would provide a tool in the effective management of public finances. Applied by the front office, it sets the objectives, priorities and the criteria for external borrowing and, from it, borrowing strategies can be derived.

The borrowing policy framework needs to be consistent with already existing policies, legal provisions and relevant international debt definitions. It should cover all of the pertinent borrowing and guaranteeing stages, categories of debt and the appropriate tiers of the public sector to be addressed. It should also be supported by institutional structures, systems and procedures that cater for the needs, responsibilities and accountabilities of all relevant stakeholders. To ensure best practices, it should also provide for appropriate remedial measures and necessary policy reviews, and address human, financial, infrastructure, information and the other resource needs of all the policy players.

The policy objectives of external borrowing should be clearly spelt out within this framework and must also be consistent with national socio-economic objectives and priorities. They should reaffirm a government's commitment to having centrally coordinated, transparent and sustainable

management of its public finances. These objectives should also encompass the efficient and accountable accessing and utilization of finance at minimum risk and cost. Good external relations should also be maintained.

Criteria for determining external borrowing and guarantees

The criteria used for external borrowing and issuing guarantees is central to determining the policy framework. They should be comprehensive, effective, realistic and binding, based on consultations with all the stakeholders. They should also be based on possession of dynamic, financial and economic information.

They cover:

Borrowing ceilings

Annual borrowing and guarantee ceilings should be linked to the country's overall repayment capacity, objectives and priorities. These ceilings should be determined according to fiscal and balance-of-payments financing needs and should also take into consideration the existing debt stock. Maximum limits should be set according to the type of external finance, the instrument and the creditor category. These limits will depend on the costs, conditions and purpose of the credits. Moreover, they should be set for economic sectors and borrowing entities (parastatals) on the basis of the use of funds, their current indebtedness and their repayment performance. In this context, productive investments should be prioritized over consumption purposes. The creation of a "negative list" of the specific uses of funds for which no external borrowing or guarantees will be approved is suggested. Exceptions to the rule may exist (e.g. disaster funding, borrowing requests after annual ceilings have been concluded).

Risk analysis and management

Loan portfolio diversification by source of funds, currency, maturity, interest rate and so forth, and use of market-based risk management instruments such as hedging, need to be considered within a sovereign assets/liabilities and risk management (SALRM) framework. Clear benchmarks, linked to the pertinent risks, need to be established in the context of such a framework. Furthermore, the integrity of domestic and external entities and individuals engaging in the borrowing process should be ascertained, *ex ante*.

Absorptive capacity and disbursement methods

It is important to consider the absorptive capacity of the projects/activities being funded. Ceilings could be set in line with the individual, sector and project implementation rates. The applicable disbursement methods should also be scrutinized, as these may have different cost implications - for example, via counterpart funding, cost escalation effects from delays or risk-factored choice of disbursement currency.

Feasibility and cost-benefit analysis

Direct and latent costs and benefits of different loan offers vis-à-vis the viability of projects/activities to be funded should be assessed. The internal rate of return (IRR) of loan-funded projects should also be compared with the related costs of borrowing.

Key debt ratios

For countries with sustainable external debt levels, emphasis should be placed on monitoring and capping the cost, risk and growth rate of the external debt. The potential impact of new borrowing on key liquidity, dynamic and solvency ratios and annual borrowing terms should be analysed in relation to international thresholds and trend analyses over time.

Sensitivity analysis of impact of loan terms

It is useful to conduct sensitivity or stress tests on the potential impact of the terms (on debt stock and debt service) of loan offers on foreign exchange reserves, budget revenues, key sustainability ratios, currency risk, interest rate risk, maturity profile and related roll-over risks, balance of payments, monetary implications and country creditworthiness or credit rating. Loans for refinancing or debt swaps, for instance, may only optimize the quality of the loan portfolio without raising it.

Loan guarantees and on-lending

The eligibility or ineligibility criteria for securing government guarantees should be spelt out, alongside detailed analyses of the current and future performance of parastatals, commitment to reform, prospects and implications for privatization, and so forth.

Limits or ceilings may be set in relation to revenue, or to the maximum allowable add-on effect of the total debt stock or service (ratio limits) and the gearing (debt/equity) ratio. Guarantee commissions charged could vary according to the importance, creditworthiness and required contingency provisions of entities concerned, with higher-risk guaranteed entities being charged higher guarantee fees. Similarly, on-lending terms should recover borrowing costs.

Criteria for loan contracting, issuance of guarantees and accountability for funds

The external borrowing policy framework should also outline the process of loan contracting or issuing guarantees and accountability. This will usually comprise four sequential stages, described below.

Preparations for negotiations

These focus on collecting and analysing financial, economic and other relevant information, including negotiation precedents, negotiation "culture" and other debtor- and creditor-specific strategic information. The detailed borrowing/guarantees criteria should be part of the debtor's information and appropriate weight should be given to the different elements of the criteria. Effective and adequate socio-economic, financial, legal, political and other key representation in the negotiation team is equally vital for successful outcomes.



Cornilious M. Deredza

Conducting the negotiations

With proper representation and adequate factual information, the "art" of coordinated negotiating should be easier, provided that individual team members play their proper roles fully and strategically in the process.

Signing loan agreements/issuing guarantees

Negotiated and agreed economic, financial and legal details should be checked in the draft agreement prior to signature. The necessary authorizations should be obtained prior to signature or issuance of guarantees by the appropriate authority. Also, conditions precedent to disbursement of loan proceeds should be realistic enough to be fulfilled within the anticipated time-frame to avoid any costly disbursement delays. Where certain elements in the loan agreement or guarantees are deemed "standard" and thus inevitably attract certain costs, these should be quantified and made known prior to signature.

Accounting for loan/guarantees proceeds

Accountability, transparency and comprehensive tracking of and reporting on the use of borrowed funds are good public financial governance, which enhances the credibility of any external borrowing policy. It should specify the format,

frequency, institutional arrangements, accountabilities, appropriate management information systems and procedures for accounting and reporting to all the stakeholders.

Conclusion

The external borrowing policy framework, if fully developed through broad country consultations, can facilitate the institutionalization of debtor countries' borrowing policies. Central to this should be an emphasis on the *ex ante* analysis of all the costs and risks inherent in any loan proposal, benchmarked to transparent policy criteria, that not only lends support to loan negotiations, but also promotes accountability in public financial management. Once the policy is set up along with its criteria, and a preventive strategy secured, the country is armed for debt negotiations.

A clear, realistic and binding external policy framework is an indispensable public financial policy instrument, which, when complemented by a sound analysis of debt sustainability and an effective legal and institutional framework, can assist debtor countries in preventing the debt problems that have been plaguing the developing world for some time.

> Past events

Study tours

25–26 November 2002

Mongolian study tour to Seoul, Republic of Korea

28–29 November 2002

Mongolian study tour to Tokyo, Japan

7–12 March 2003

Bangladesh study tour to Manila, Philippines

Seminars/workshops

4–8 November 2002

Workshop on data validation, Geneva, Switzerland

11–15 November 2002

Training for Trainers workshop on teaching pedagogical skills, Geneva, Switzerland

25–29 November 2002

UNDP/UNCTAD workshop on debt statistics, Nairobi, Kenya

3–7 March 2003

INTOSAI workshop, Panama City, Panama

12–23 May 2003

IMF seminar on public external debt management, Brasilia, Brazil

> Future events

Meetings

25–26 September 2003

World Bank Treasury Meeting - Information Technology for Reserves Management, Rome, Italy

November 2003

Fourth Inter-regional Conference on Debt Management, Geneva, Switzerland

November 2003

DMFAS Advisory Group meeting, Geneva, Switzerland

November 2003

WADMO meeting, Geneva, Switzerland

Seminars/workshops

7–11 July 2003

MEFMI - DSM+ Workshop, Harare, Zimbabwe

15–19 July 2003

UNITAR/UNCTAD workshop on legal issues of debt management, Geneva, Switzerland

29 September–8 October 2003

UNCTAD/Pôle Dette workshop, Brazzaville, Congo (tentative location), to strengthen DMFAS IT management in West and Central Africa

> > DMFAS TEAM

> Departures / New appointments

Ms. Eva-Kristiina Kuusamo-Tuusvuori left the DMFAS programme, but not UNCTAD, in February 2003. She assisted the DMFAS secretariat, in particular with the organization of meetings and conferences and also provided documentation support. We wish her success in her future career, and we will certainly miss her a lot.

Mr. Jaime Delgadillo joined the DMFAS team after working as a consultant. Former head of the debt office in his native Bolivia, as well as Central Bank General Manager and Vice-minister of Economic Policies, Mr. Delgadillo has had extensive experience in debt negotiations and debt management. Also specializing in debt sustainability analysis, he reinforces the team of DSM+ experts.

Mr. Percy Campuzano recently joined our team. Percy will reinforce our group of computer programming experts for the development of DMFAS 5.3.

> DMFAS programme staff

Name	Title	Tel. (+41 22)
Marcelo Abalos	Systems Designer	907 5858
Fernando Archondo	Senior Debt Management Expert	907 1139*
John Barrozo	Computer Programmer	907 5539
Alain Bodin	Senior Debt Management Expert	907 5856
Nathalie Bois	Senior Secretary	907 6048
Pål Ivar Børresen	Training Coordinator	907 5917
Percy Campuzano	Computer Programmer	907 1114
Marilyn de Guzman	Systems Analyst/Programmer	907 6291
Jaime Delgadillo	Senior Debt Management Expert	907 5141
Vanessa de Thorpe Millard	Training and Communications Expert	907 5557
Hélène Fabiani	Documentation Expert	907 5835
Rubén Darío Guillén Velázquez	Computer Programmer	907 5653
Manuela Jander	Project Manager	907 2741
Raúl Javaloyes	Associate Programme Officer	907 5573
Andrei Krylov	Economic Affairs Officer	907 5931
Ricardo Murillo	Project Manager	907 5574
Gabor Piski	Project Manager	907 4687
Ximena Renault	Secretary	907 5852
Philippe Straatman	Chief	907 5845
Gerard Teeling	Systems Coordinator	907 5859
Marcelo Tricarico	Debt Management Expert	907 5860
Ellen van't Sant	Administrative Clerk	907 1696
Mark Willis	Project Manager	907 6218
Gilberto Zabala-Peña	Information Systems Specialist	907 6049

* +1 202 458 2691 -Washington

> DMFAS consultants

The following consultants have recently undertaken assignments for the DMFAS programme:

Name	Country of origin
Mr. Balliram Baball	Trinidad and Tobago
Mr. Jacques Baert	Chile
Ms. Cecilia Caligiuri	Argentina
Mr. Sebastián Cataldi	Argentina
Mr. Dovi Coco Anthony	Togo
Mr. Khaled El-Sayed	Egypt
Mr. Jose Flores	Honduras
Mr. Nihal Kappagoda	Canada
Ms. Roula Katergi	Lebanon
Ms. Lucie Kompaore	Burkina Faso
Mr. Alexander Kovalenko	Russian Federation
Mr. Emilio Nastri	Argentina
Mr. Antonio Sanchez	Nicaragua
Ms. Mirvat Zeitouneh	Lebanon



The DMFAS Central Team in Geneva

Correspondence for the Newsletter should be sent to:

DMFAS Info Editor
 Villa le Bocage 116
 UNCTAD
 Palais des Nations
 CH-1211 Geneva 10
 Switzerland
 Tel: + 41 22 907 5924
 Fax: 41 22 907 0045
 E-mail: dmfas@unctad.org

DMFAS hotline
 Tel: + 41 22 907 6049
 Fax: 41 22 907 0045
 Web page: www.unctad.org/dmfas

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