Cashflow forecasting - using new technology

Setting up a network system that can meet the firm's global cashflow forecasting needs is set to make life much easier for Marconi's UK Treasury, says Raj Maisuria.

Cashflow forecasting is an important and fundamental task in any organisation. This is particularly true in a growth industry like telecommunications.

The businesses supply the information to Marconi GT who are the users. It is essential that the accuracy of the forecasts be fed back to the suppliers as a performance measure and part of a process of continuous improvement. However, this paper focuses on the use of new technology for the efficient and timely collection of information.

The information needs to be timely and accurate for the treasury department to manage the funding requirements for that business. But as an exercise, this task can be time-consuming and the underlying data is often inaccurate. The problem being, of course, that the individual business units responsible for supplying the data feel no responsibility for the final product. Making them accountable is a daunting task that often crosses internal political barriers.

Most companies collect cashflow information using emails or faxes received from the relevant business units. This data is then manually consolidated into a spreadsheet model (double input).

The disadvantages of not having a central system to collect, process and analyse cashflow data are as follows:

- timing errors of not having up-to-date data;
- turnaround of rapid changes in cashflow forecasts;
- errors introduced during the double input stage;
- inability to accurately undertake variance analysis, because all transactions have to be input into the spreadsheet model; and
- exposure by currency of the local entity.

The key to successful cashflow forecasting is to address the following:

- **up-to-date data –** it is important to ensure that up-to-date cashflow data is available to treasury in real time. This is essential in that if the cashflow had been hedged, and there are changes to the cashflow forecast, these changes need to be incorporated immediately to realign the hedged position;
- **errors –** collecting cashflow information using traditional methods via spreadsheets can be time-consuming and errors can be introduced at both the initial input stage and at the re-keying stage when all the different spreadsheets are consolidated into a single model;
- **variance analysis –** the traditional spreadsheet method of cashflow forecasting does not lend itself to perform variance analysis readily. To accurately perform a variance analysis, all the deals that have been undertaken have to be input into the spreadsheet model. Again, this is another time-consuming task that can attract errors.

There are many systems available that can undertake cashflow

Raj Maisuria

Marconi

Information and technology giant Marconi has operations in more than 100 countries and some 240 business units worldwide. Its main areas of activity include communications, mobile, services and systems and it sits in the top 25 of the FTSE 100 companies. It is also listed in the USA on the NASDAQ exchange. As an organisation, it has been transformed from GEC following the demerger of its defence and aerospace businesses. It employs about 50,000 people worldwide and for the financial year ended March 2000, its annual global turnover was £5,724m with an operating profit of £750m. Its current credit rating is A3/BBB+ and has issued both Eurobonds and Yankee bonds.

Marconi's group treasury (GT) department is based in London from where it provides a treasury support function for all Marconi's business units worldwide. We also have treasury operations in the US and Italy.

To ensure the GT can provide an effective support role for all Marconi's business units, we are using the latest systems and technology, which we will look at in this article. Marconi has its own robust global network infrastructure, which using Marconi equipment (super fast switches and routers), technology such as Synchronous Digital Hierarchy (SDH) and fibre optic technology, provides connectivity to all our businesses worldwide. The robustness of the global network ensures that the network is resilient to systems failure and provides a high level of security. ■

forecasting modelling. A good solution is to have a central treasury system that includes such a module, but where this module has the flexibility of a spreadsheet coupled with the accessibility of a database. This would then allow the Treasury function to 'slice' the data in many possible ways enabling, for example, exponential smoothing or another statistical method to analyse the data; and

- **currency exposure –** each business unit will have both its local currency exposures and exposures in other currencies. Marconi GT needs to know the size, timing and likelihood of these currency exposures to actively identify, offset and hedge the currency exposures in accordance with treasury policies.

Setting up a treasury system "the Marconi way"

Marconi has recently implemented the Richmond Millennium treasury system at its UK GT function. The GT needs to know about all outstanding financing transactions (including loans, deposits, foreign exchange contracts and leasing contracts) undertaken by all business units worldwide to ascertain the group's global position regarding cash/debt and foreign exchange positions.

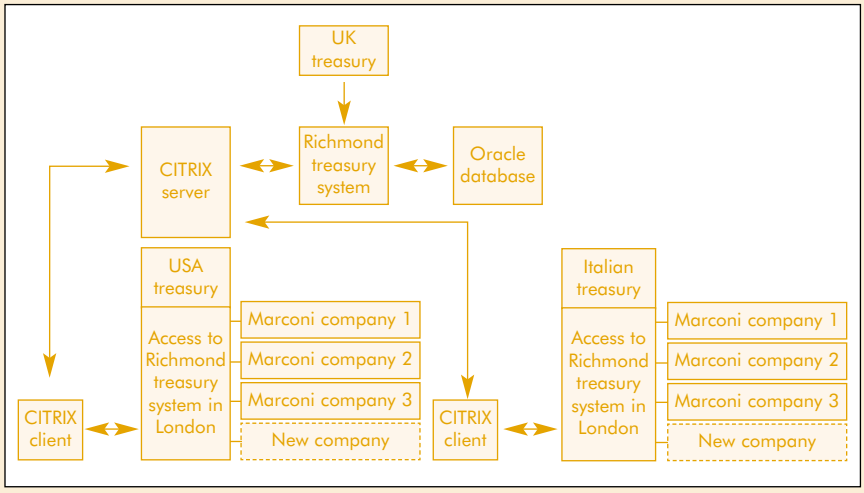
The original plan was to install the Millennium system at the three main business sites within Marconi – namely, the UK, the US and Italy. This would have meant that each site would have its own database and in order to consolidate the data from these sites to arrive at a group consolidated position, it would have required all three databases to be combined. The disadvantages of this approach are as follows:

- manual process to merge the three databases;
- requirement to ensure that the Millennium system at all three sites is the same release version;
- database administrators required for each site locally to manage and maintain their database accordingly; and
- multiple software licence and maintenance fees payable to the vendor.

Another option we discussed was to implement the Millennium system at the Marconi UK GT using a traditional WAN (wide area network) technology.

FIGURE 1

Proposed world-wide systems architecture for Marconi Group Treasury



This would provide all users in the UK, US and Italy with access to the centralised Millennium system. Unfortunately, because of heavy network traffic, it meant access times to the system would have been prolonged and the time taken to process data would make this a non-viable solution. Network traffic can be at a peak during month-ends when many transactions are being processed and a large volume of reports printed.

The decision we came to was to use Citrix server-based computing technology, which would enable the Millennium system to be installed at a single site within Marconi UK GT as a single database. (The overall diagram for the worldwide systems architecture can be seen in *Figure 1*).

Server-based computing: Citrix

Server-based thin-client is a model in which applications are installed and run from a server. The server required must be of an extremely high specification but the PCs connected to it via the network can be much lower. Traditionally, a server was used to channel data around the network and all processing of data was predominantly undertaken at the PC end. This meant that a lot of data was being channelled over the network. As the network traffic increases, so does the requirement for bandwidth. Using the Citrix solution, all data processing is undertaken within the server, and the information which passes between the PCs and the server are bitmaps (ie pictures) of mouse movements, keypad strokes and screen updates. This means network traffic is greatly reduced and if applications are being processed over a large WAN, the performance is excellent.

This technology provides the convenience for a number of users around the world to access an application situated at one single location.

Plug & play solution

We are in the process of installing two Citrix servers at the UK GT site in London and ultimately roll out the Millennium application to all our business units around the world. This will enable Marconi GT to obtain up-to-date cashflow forecasting information and, with all transactions being recorded within Millennium, it will provide variance analyses.

This structure provides us with a plug and play solution. As new companies are acquired, we simply install the Citrix client at the new company's site and within a few hours, the new company can provide Marconi GT with data.

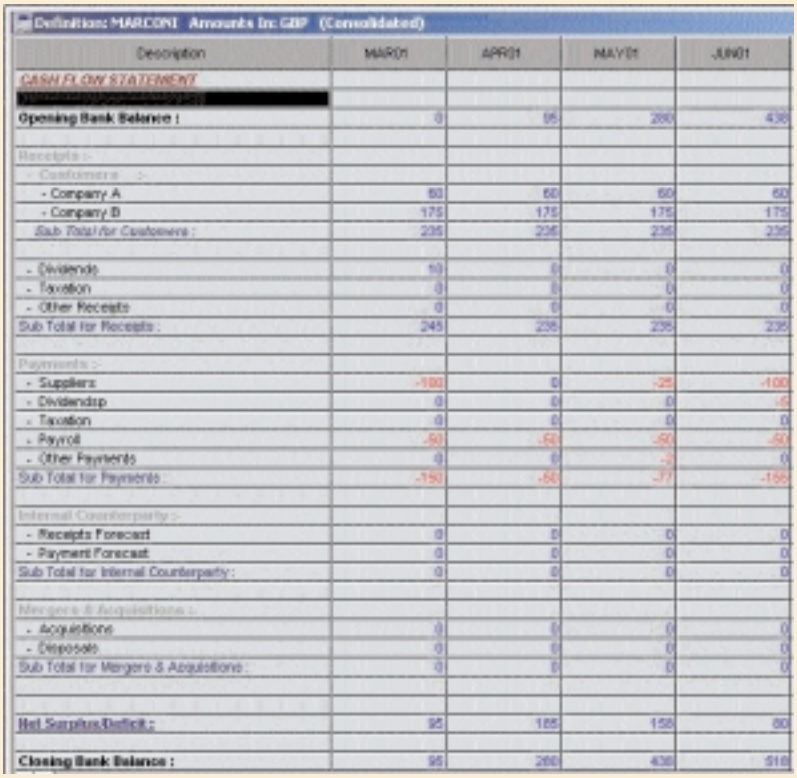
Cashflow forecasting

The cashflow forecasting module within the Millennium system is easy to use and as flexible as a spreadsheet. An abbreviated specimen proforma is shown in *Figure 2*. This is for illustration purposes only, showing the capability of expanding the categories to whatever level of detail required.

As *Figure 2* shows, the user defines the categories and time periods for

FIGURE 2

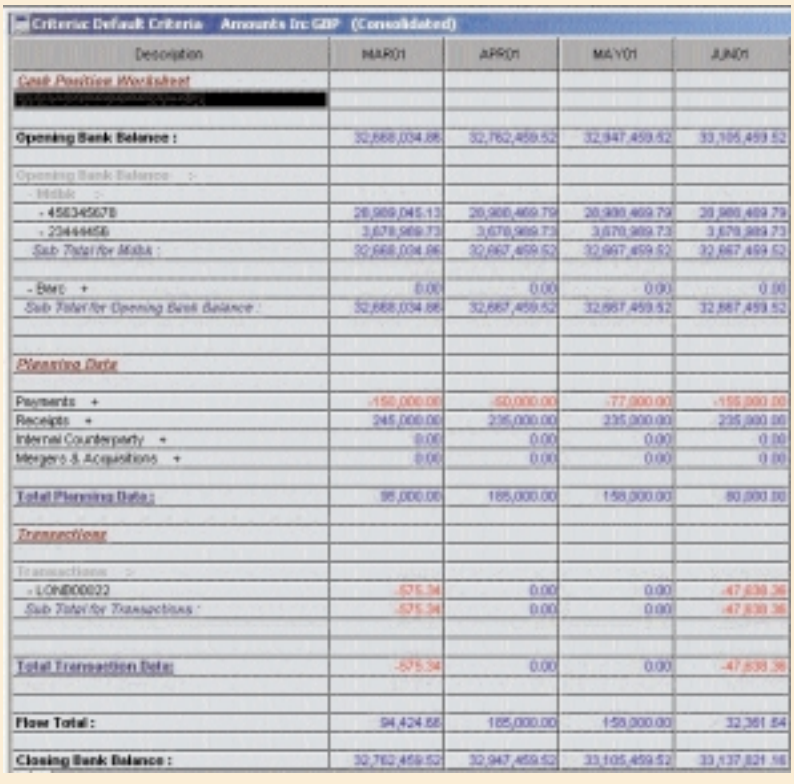
Cashflow forecasting module



Description	MAR01	APR01	MAY01	JUN01
CASH FLOW STATEMENT				
Opening Bank Balance :	0	95	260	436
Receipts :-				
- Customers :-				
- Company A	60	60	60	60
- Company B	175	175	175	175
Sub Total for Customers :	235	235	235	235
- Dividends	10	0	0	0
- Taxation	0	0	0	0
- Other Receipts	0	0	0	0
Sub Total for Receipts :	245	235	235	235
Payments :-				
- Suppliers	-100	0	-25	-100
- Dividendsp	0	0	0	-5
- Taxation	0	0	0	0
- Payroll	-50	-50	-50	-50
- Other Payments	0	0	-3	0
Sub Total for Payments :	-150	-50	-77	-155
Internal Counterparty :-				
- Receipts Forecast	0	0	0	0
- Payment Forecast	0	0	0	0
Sub Total for Internal Counterparty :	0	0	0	0
Mergers & Acquisitions :-				
- Acquisitions	0	0	0	0
- Disposals	0	0	0	0
Sub Total for Mergers & Acquisitions :	0	0	0	0
Net Surplus/Deficit :	95	165	158	80
Closing Bank Balance :	95	260	436	516

FIGURE 3

Cash position worksheet



Description	MAR01	APR01	MAY01	JUN01
Cash Position Worksheet				
Opening Bank Balance :	32,668,034.88	32,762,459.52	32,947,459.52	33,105,459.52
Opening Bank Balance :-				
- Midas :-				
- 45634567B	28,989,045.13	28,989,469.79	28,989,469.79	28,989,469.79
- 23444456	3,679,989.73	3,679,989.73	3,679,989.73	3,679,989.73
Sub Total for Midas :	32,668,034.86	32,667,459.52	32,667,459.52	32,667,459.52
- Bmt :+	0.00	0.00	0.00	0.00
Sub Total for Opening Bank Balance :	32,668,034.86	32,667,459.52	32,667,459.52	32,667,459.52
Planning Data				
Payments :+	-150,000.00	-50,000.00	-77,000.00	-155,000.00
Receipts :+	245,000.00	235,000.00	235,000.00	235,000.00
Internal Counterparty :+	0.00	0.00	0.00	0.00
Mergers & Acquisitions :+	0.00	0.00	0.00	0.00
Total Planning Data :	95,000.00	185,000.00	158,000.00	80,000.00
Transactions				
Transactions :-				
- LON000022	-575.34	0.00	0.00	-47,839.36
Sub Total for Transactions :	-575.34	0.00	0.00	-47,839.36
Total Transaction Data :	-575.34	0.00	0.00	-47,839.36
Flow Total :	94,424.66	185,000.00	158,000.00	32,361.64
Closing Bank Balance :	32,762,459.52	32,947,459.52	33,105,459.52	33,137,821.16

cashflow forecasting. Each category can be regrouped up to six levels within each definition, allowing the user greater flexibility. Marconi GT then has the ability to combine data and analyse data sets by time period, entity, currency and category. Cashflow data can be entered by the business unit in the currency of the exposure and then translated locally and centrally for reporting purposes.

Following this, the cashflow data can be incorporated into a cash position worksheet (CPW), which includes bank balances and transactional data (see *Figure 3*). This provides the view for the group. Similar to the forecast model, the layout for the CPW is free format and provides 'drill-down' interrogation of all relevant data points.

Ready for FAS 133

The technology platform chosen provides Marconi GT with significant benefits and a greater macroscopic view of the group and its financial activities as a whole. The main advantages are:

- the initial expense of implementing a high specification Citrix server is offset by the low-end requirement of the user PCs. Additionally, new users can be introduced to the environment with minimum technical changes and support. Therefore providing a true plug & play solution;
- the system provides Marconi GT with an accurate view of the business exposures both from a funding, currency and interest rate risk perspective. The data integrity is maintained at a higher level reducing at least the multiple effect of human error. The system provides the additional benefit of being able to view the data in reported local currency and consolidated centrally to any elected currency; and
- this platform facilitates Marconi plc in achieving a corporate objective of FAS 133 compliance by 1 April 2001. Having captured the exposure data centrally, Marconi GT can carry out the day-to-day activity of risk management being able to document and account for hedges in the appropriate manner. ■

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