

TremaSuite™ : The System for the European Central Bank

From January 1999, the European System of Central Banks (ESCB) will start to operate. The ESCB comprises the European Central Bank (ECB), headquartered in Frankfurt, and the National central banks (NCBs) of the EU Member States. The major responsibilities of the ESCB are to define and implement the monetary policy of the EU. In 1997, the European Monetary Institute (EMI), the forerunner of the ECB, initiated a project to select and implement a software system to manage the ECB's foreign reserves. Earlier this year, the EMI announced that it had chosen TremaSuite™ for this vital project. Since then, consultants, project managers and engineers from Wall Street Systems have been working closely with experts from the ECB (having taken over from the EMI) and from NCBs to install, configure and test the system.

For this article, Finance Line spoke to Magnus Fried, the project manager, and Klaus Jensen, economist, of the ECB to establish how TremaSuite™ will be used within the ESCB and the purpose and implications of the foreign currency reserves.

The ECB's Foreign Exchange Reserves



European Central Bank

The European Central Bank (ECB) will, according to the Maastricht Treaty, receive up to ECU 50 billion in foreign exchange reserves by 4 January 1999. In the initial stage, the amount will be just under ECU 40 billion. The foreign exchange reserves will be transferred from the national central banks. The contribution of each national central bank is fixed in proportion to its share in the subscribed capital of the ECB.

The European Central Bank foreign exchange reserves are the foundation of the ECB's exchange rate preparedness. An important objective of the ECB's foreign reserve management is to ensure that the ECB has sufficient liquid resources available to support its foreign exchange policy, if that would become necessary. Consequently, in investing the foreign exchange reserves, security and liquidity play very important roles. Return is in many respects maximized, subject to the security and liquidity restrictions. TremaSuite™'s advanced monitoring functionality for market and credit limits will closely control the investments. TremaSuite™ will give warnings if any limits are broken.

In a commercial investment bank, security and liquidity also have a prominent role. However, the emphasis and focus on the bottom line is undoubtedly much bigger.

Besides standard portfolio management, advanced credit and market risk management and performance measurement formed the initial requirements to a portfolio management system for the management of the ECB's foreign exchange reserves.

Finding a Suitable System - the Selection Process

At the start of the system selection project, the ECB (previously EMI) originally sought a front and middle office system. The tender document stipulated, "The main areas of functionality which the system will cover are performance measurement, and credit and market risk monitoring. In order to fulfill these tasks, it [the system] will also have to contain functionality for deal capture and position keeping. "

Magnus Fried explains the selection procedure, "We formed our first judgment on the quality of the

initial responses to our requirements document," he says. "The second round was a short test. We went to Wall Street Systems' Stockholm office for a day, where we were given a demonstration and where we tested sample data that we prepared. After that, we went to a final shortlist where we performed a systematic evaluation test. We also attended a workshop in Wall Street Systems' Sophia Antipolis office to follow up some outstanding issues."

"The systematic testing showed that Trema**Suite**[™] provided a good fit to requirements," continues Magnus Fried. "There were some gaps in requirements, but the testing showed that, in the short term, Trema**Suite**[™] was a good solution for the ECB and that it would become an even better solution in the long term. It's a solution that can grow with us, because of the emphasis and expertise in the area of portfolio management. The 4.3 release of Trema**Suite**[™] fills some of the gaps, and in spring, we will get the remaining project requirements."

Trema**Suite**[™] is a flexible system, and one that's not in the last phase of its development. It has a good, easy-to-use interface, and it's based on modern technology. Also, we found that within the Wall Street Systems staff, there were a number of very qualified, knowledgeable staff relating to the functionality we required and we were happy to be able to secure their assistance during the project.

Data Monitoring and Security is Fundamental

The management of the ECB's foreign exchange reserves will be decentralized, implying that each NCB will manage a part of the reserves. "Together with the NCBs, we worked out some guidelines regarding the investment of the foreign exchange reserves, inter alia guidelines for the market and credit risk", explains Jensen. "Within those guidelines, the NCBs are free to invest the foreign exchange reserves. We were looking for a system that could support the guidelines that we agreed upon."

The decentralized management set-up requires some special monitoring and security functionality. Therefore, the system had to have advanced monitoring and control functionality, which enabled the ECB to monitor several sites. At the same time, the system should ensure that no NCB could view the portfolios of another NCB. "Controlled viewing of data by the NCBs and the ECB was one of the criteria we had for selecting the system," Jensen continues.

Furthermore, the decentralized set-up sets high standards for the system availability. To ensure that the high availability requirements are met, the ECB is using double servers with 'HA' (High Availability) software from Sun Microsystems, which ensures that each machine backs up the other in the event of a crash or power failure. At the Trema**Suite**[™] level, the ECB will be setting permissions per Trema**Suite**[™] object; these objects can be applications, user groups, and so on. Wall Street Systems has developed the permissions system further for the ECB's demanding security needs at the operational and functional level.

At the data level, Trema**Suite**[™]'s portfolio principle will control data access. Each NCB will have a main portfolio from which they can create sub-portfolios, but only the ECB will be able to see all the main portfolios. Robert Wennerström, Project Manager, Wall Street Systems, explains, "In Trema**Suite**[™], there is no limit to the number of portfolios you can have, apart from the fact that, practically, you cannot successfully manage too many portfolios at the same time. The ECB is going to use the 'four-eyes' principle, meaning two people with two eyes, for controlling who does what with each portfolio. So, in effect, I can update a portfolio, but only you can verify it, and vice versa."

Looking Forward to a Fully Integrated System

Jensen's earlier comment that Trema**Suite**[™] was chosen because it is "a solution that can grow with us" has already proven true. The ECB had decided now that Trema**Suite**[™], always designed and intended as a front, middle and back office application, will be extended to cover the bank's back office requirements. Magnus Fried explains, "During the business preparation for the I16 project (the project to choose and implement a new front and middle office system) we realized that in some other areas - including sub-ledger accounting - the system chosen for reserve management (I16) could also be used for these other activities."

For sub-ledger accounting Wall Street Systems is developing the Central Bank Accounting Module (CBAM), which is built around new central accounting standards for the whole ESCB. The need for the module stems from the fact that while the reserve management operations will be settled by the NCBs, the accounting will be done by the ECB. The CBAM project is still in its infancy and is due to be delivered in May/June 1999.

The ECB will be using the European payment clearing system TARGET (Trans-European Automated Real-time Gross settlement Express Transfer System). Transactions from Trema**Suite**[™] will be sent to TARGET via S.W.I.F.T messages, using Finance KIT's back office interface to S.W.I.F.T.). TARGET will be closed only on Christmas Day and New Year's Day (the bank holidays of each country are ignored) - this means that the euro can be traded every day of the year except for Christmas Day and New Year's Day.

An Effective Project

Kari Mäkelä, Chairman, Wall Street Systems, comments on the project and what it will achieve, "The ECB has now accepted the first phase of the project and the second phase will be completed next year. The project has required resources from nearly all departments at Wall Street Systems, and we have dedicated some of our most senior personnel, often from senior management, to ensure its success. " He continues, "Working with the ECB has given us a good insight into their operation and furthered our understanding of a central bank's requirements. "

The central banks are the latest area of the financial markets that are benefiting from Trema**Suite**[™]. Many of the their requirements lie between what is required by a bank and an investment management company. Mäkelä sums up, "Trema**Suite**[™] is, and always has been, a fully integrated solution. With the South African Reserve Bank, we will have central bank installations on two continents. When the Central Bank Accounting Module is ready next year, and enhancements to suit the exacting needs of the European Central Bank are finished, Finance KIT has the potential to become the de facto choice for all central banks. "

The Role of the European System of Central Banks

The European System of Central Banks (ESCB) is an organization that has been created to maintain price stability and to support the euro within the European Union (EU). The ESCB consists of the European Central Bank (ECB) and the National Central Banks (NCBs) of the member states of the EU. Member countries are contributing foreign currency reserve assets worth EUR 50 billion to support the euro. Trema**Suite**[™] is the system they have chosen for the task.

The basic tasks to be carried out by the ESCB include:

- to define and implement the monetary policy of the Community;
- to conduct foreign exchange operations;
- to hold and manage the official foreign reserves of the participating Member States;
- to promote the smooth operation of payment systems and to contribute to the smooth conduct of policies