



## Success Story

Industry:

Finance

Division:

Data Care in Repo  
and SecLend Market

Target:

Quality-assured and  
agile Business Rules

Result:

98% Automation



## Eurex / Swiss Exchange (SWX) Rule-based Master Data Care

Interview with

Francisco Gonzalez,  
Head of Eurex SecLend and  
Jan Trnka,  
CEO Stabilit

May 2008

### Innovations:

As the world's largest derivatives exchange, Eurex has played a pioneering role in electronic trading from the start. Since 2005, you have operated an electronic trading platform for the securities lending market. How does that market work?

### Gonzalez:

Eurex is a joint venture of the Swiss and German exchanges and did indeed play a pioneering role right from the start. Initially, attention was focused on utilizing the potential of both geographic markets. In 1999 we took that a step further and initiated an electronic trading platform for the repo market, for the sale and purchase

of securities with what are called repurchase agreements. Since 2005 we have been able to offer customers an electronic platform for securities lending as well, through which securities can be loaned and borrowed. The borrower becomes the owner of the securities. With electronic lending we are entering new territory. The challenge lies in convincing market participants of the advantages offered by multilateral trading compared to bilateral trades. The lending market today is still largely characterized by bilateral relations between trading partners. The advantages of multilateral trading – primarily objective price determination and transparency – represent huge growth potential for this new electronic market.

### Innovations:

How large are the repo and securities lending markets today and how do you see their growth?

### Gonzalez:

The repo market in the US and Europe

is estimated at about USD 6 trillion. Asia just jumped in with both feet a year ago and since then, the Asian market has seen growth of 15% to 20%. Of total volume, electronic trading currently accounts for just one one-thousandth.

So the potential for electronic trading lies first in the growth of international markets themselves, and secondly in activating the available securities and bringing them into the trading. Smaller and mid-sized banks can play an important role in that. We will be offering them an opportunity to move into this in the future with a lean collateral management tool.

We are involved in business development for the SecLend market in general because we see a huge potential there. That's why we developed standards for evaluating lending products. Depending on their quality, securities are divided into around 50 baskets as categories. Finally, we want to continue to drive standardization in this market.

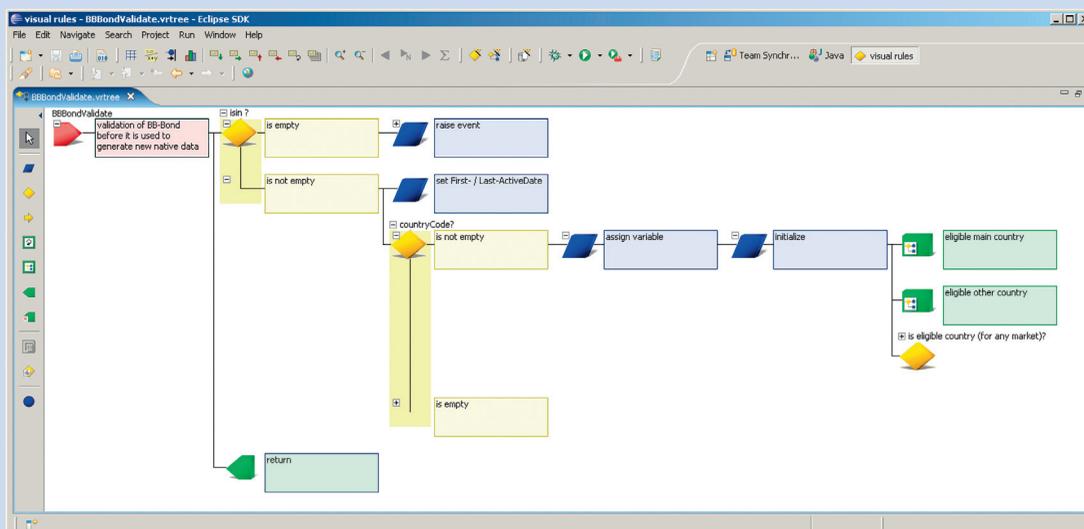


Figure 1: Validation Rule for an Obligation before Entering Master Data

### Innovations:

Your estimate of the market potential explains clearly why you had already started developing SecLend as the electronic trading platform of Eurex back in 2004. Has your rapid growth run up against any limitations?

### Gonzalez:

We quickly discovered that our ability to administer our master data presented real limits to our growth. We started with 1,000 securities, today SecLend has 27,000 and in two years we plan to be working with a volume of 60,000.

Even at less than 10,000 securities we had reached the limits of manual data care. Four employees were already completely occupied with just entering data on new and existing securities being traded. Expansion, such as adding more baskets, was out of the question. The manual process also posed a huge potential for errors. We were confronted with serious data quality problems.

In an initial evaluation round, we took a look at rule engines for automating master data care, since rules are the central element in any automation. But we had to take another step back and first create a model of our business. Finding the optimal approach was essential for us since, as the Eurex SecLend team, we're responsible for data quality. And our goal was to automate data care as completely as possible.

### Process of Manual Master Data Care:

- Step 1: Select relevant daily securities from a variety of sources.
- Step 2: Assign the securities to markets and baskets, depending on value and type.
- Step 3: Capture additional data on new and existing securities.

### Innovations:

Those are the reasons that led you to implement the Master Data Automation Project with Stabilit, a service provider in this field. How did you set about this project and what were some of the exceptional challenges?

### Gonzalez:

With our high level requirements, we could not just implement a standard IT project. We – the business department – had to take action. We built the business case for developing master data services ourselves. Together with our project partner, we created an architecture that enables us to maintain our rules completely independently. Since the business department has the professional expertise and is responsible to our clients for data quality, we as-

sumed internal responsibility for the business rules as well. This separation did not cause any problem to the business or IT department. Responsibilities among IT (SWX), business (Eurex) and the external service provider (Stabilit) were documented precisely. As a business analyst, I consider myself as a bridge between business and IT. Visual Rules has supported me in that role – that is the rule engine we implemented in our system. It is close to business and to IT. With fundamental logical thinking and business know-how, our department can modify rules without support from IT and pass them to the productive system. This has meant that we can achieve enormous reaction speeds in response to market dynamics.

“Visual Rules supported me in my role as a bridge between business and IT.”

### Trnka:

Just because of this flexibility and response speed we had to ensure that only completely tested rules made it into production when rules were modified. Together, we drafted a four-stage system to do just that.

**Innovations:**

How did Stabilit approach defining the rules?

**Gonzalez:**

Jan Trnka engaged our employees in the dialog – that was fundamental.

**Trnka:**

Equipped with Visual Rules, the rules were created in a cooperative effort. In the process, we found that each employee had their own rules for capturing master data. By working with Visual Rules, we were able to create a uniform perspective on rules and consolidate that within the department.



Left: Francisco Gonzalez, right: Jan Trnka

**Gonzalez:**

This approach cost us a full month but on the other hand we gained years as a result. Today we know precisely which rules are implemented and what tasks they fulfill.

Working together with our employees and with me, Stabilit created the basic inventory of rules and functions. Today we have several thousand rules that we modify an average of every two weeks – without support.

“By using Visual Rules to consolidate our rules, we have gained years.”

**Innovations:**

Can you give us a few examples of these rules and functions?

**Gonzalez:**

An example of a recurring function is “Compare Fitch-Rating, for instance, Fitch > Single A.” One rule defines the geographical area for a certain security, for example, like Germany. (see Figure 1).

**Innovations:**

As a project result you are now using Stabilit’s Data Care Manager (DCM) that allows you to automate the capture and administration of master data. What role does Visual Rules play with DCM?

**Trnka:**

The rules – and thus Visual Rules – play a central role in the process of data care (see Figure 2).

We were careful not to hard program a single rule. All rules, from merging through validation and release, are implemented in the rule engine.

**Gonzalez:**

The use of the rule engine in DCM allows us to simulate rule modifications. This is the key factor. For instance, if we want to introduce a new category of securities, we can see immediately how many securities the market would have to absorb and whether

our system could handle that without problems. This simulation capacity is essential for our estimation of the risks involved in rule modifications.

“The simulation capacity in the rule engine is essential for our estimation of the risks involved in rule modifications.”

**Innovations:**

Your goal was to automate master data administration as completely as possible. To what extent did you succeed?

**Gonzalez:**

We are now at an automation rate of 98%. Our employees can take care of the exception handling on the side. All of our employees who were previously completely occupied with data care now have attractive and responsible tasks.

It is not just the degree of automation that is so impressive. The quality of master data care has been the best since the rule-based Data Care Manager was implemented.

**Innovations:**

That kind of result speaks for itself. In addition to the high level of automation and increased quality, can you name any other benefits you have seen since implementing a rule engine?

**Gonzalez:**

The documentation that our rule engine delivers is extremely important to us. Since it is generated with the push

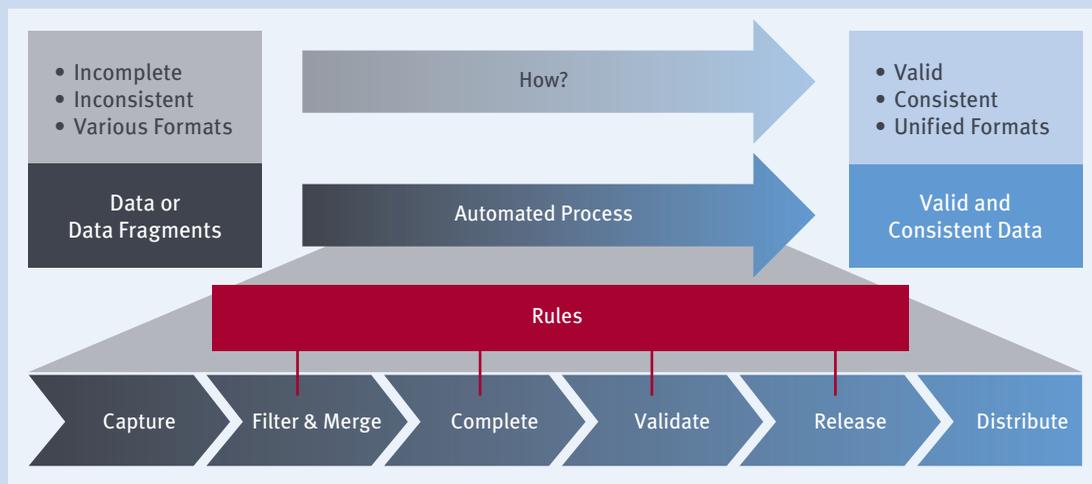


Figure 2: Business Rules in the Data Care Process

# Visual Rules for Master Data Care at Eurex

of a button, of course it is as up-to-date as the respective productive rules. We did not have that level of documentation in the past.

The simulation function we mentioned is just as important. The Data Care Manager makes it easy for us: we can specifically reset the data and rules after the simulation, for instance back to a specific version or time.

Last but not least I would like to mention a benefit that, as business users, we tend to foreground. Never in the past have we been able to have modifications we wanted available in a system as quickly as we can today. Just as soon as we have gone through our internal business modification process, we can put the rules into productive use at runtime – without having to stop the system.

## Innovations:

As an independent market provider, the view into the future is decisive for you. Do you see more areas where implementing a rule engine could be advantageous?

## Gonzalez:

Implementation of these rule engines certainly represents the future. Rules do not belong in paper documents. Any system that contains a number

of rules should be using a rule engine. For example, use in the trading system is conceivable. We see a clear advantage with a standard product like Visual Rules, which is improved continuously. There is just no alternative to that in the Eurex framework.

“Any system that contains a number of rules should be using a rule engine.”

With Visual Rules, we have created plenty of room for creative development. We will only come up against the limits of business’ personal responsibility when we need new interfaces, for instance, or a modification in the data model.

## Innovations:

Mr. Gonzalez, Mr. Trnka, thank you for this interview.

The interview was conducted by Stefanie Peitzker, Visual Rules Marketing, and Dirk Urbansky, Visual Rules Sales, both with Innovations Software-technologie.

Information on trademarks:

Visual Rules is a registered trademark of Innovations Software-technologie GmbH. Innovations’ rule technology is patented (GBM 20014430).

## Benefits:

- Consolidation and automation of rules for master data care
- High reaction speed in a dynamic market
- Business modifies the rules without support
- Simulation function minimizes the risk of rule modifications
- Automated rule documentation

## Eurex

Eurex is a joint venture of Deutsche Börse and SWX Swiss Exchange. Eurex is the world’s largest derivative exchange and one of the largest market providers for Repo and Securities Lending & Borrowing (SLB) in Europe.



## Innovations Software Technology

Innovations Software Technology provides products and services for Business Rules Management. This comprises the Visual Rules Business Rules Management System, the Visual Rules Professional Services, and rule-based solutions used internationally by companies in Finance, Insurance, Retail, Telecommunication and Manufacturing.

## Contact:

### Europe/Asia:

Innovations Softwaretechnologie GmbH  
Ziegelei 7  
88090 Immenstaad / Germany  
Tel. +49 (0) 75 45 / 202 – 300

[www.visual-rules.de](http://www.visual-rules.de)  
[info@visual-rules.de](mailto:info@visual-rules.de)

### Americas:

Innovations Software Technology  
161 North Clark Street  
Suite 4700  
Chicago, IL 60601 USA  
Tel. +1 (312) 523-2147

[www.visual-rules.com](http://www.visual-rules.com)  
[info@visual-rules.com](mailto:info@visual-rules.com)