In particular, it found that the standard XBRL tools available in 2004 were not designed with newcomers to XBRL in mind. It therefore decided to organise the development of its own customised tool, tailored to its reporting requirements. This is based on a vendor's standard tool, but has a user interface and some other specific features added to ensure ease of reporting to the BoJ.

Success factors

Aside from the normal steps involved in careful project planning, the BOJ found a number of informational and technical factors were important to success. They included:
- Good flow of instructions and help information to all prospective users and submitters of data.
- Efficient management of taxonomy metadata. This covers a number of issues:
  - Careful sizing of taxonomy metadata. The BoJ has tried to curb the size of its taxonomy to avoid data processing delays in banks caused by limits on PC capacity and communication delays on its VPN.
  - Fast processes for taxonomy updating, since detailed reporting requirements may change between monthly reporting periods. Submitting banks must have time to download a changed taxonomy and make appropriate changes to their reporting before the following period.
  - Efficient information on taxonomy versions. Reporting banks must easily be able to choose the correct taxonomy to use, particularly when re-submitting reports for earlier periods.
- The provision of easy-to-use technical tools.
- Good understanding of business processes and the flow of information throughout the reporting process.

Next steps

The BoJ is now focussing on three main areas of development:

- *Expansion of data coverage*

The BoJ is proposing to expand XBRL coverage to cover the annual reports submitted by financial services companies. This means covering more than 10,000 data items compared with about 3,500 handled under monthly reporting.

- *Development of XBRL database*

The BoJ plans to develop a database specifically designed to store and give efficient access to XBRL reports from the organisations which it supervises.

- *Development of improved taxonomy versioning system*

The BoJ will introduce new versions of its taxonomy to reflect changes in regulations in reporting requirements. Companies will be required to identify and report against the appropriate version for each period. The fast and efficient management of such changes and the accurate storage of data pose a number of challenges which the BoJ is planning to address.

Conclusion

The Bank of Japan XBRL project provides a good example of a well-planned project by an important financial services regulator which is already providing benefits. Plans are under way to extend the BoJ's use of XBRL and broaden these advantages.

XBRL CASE STUDIES: SHOWING XBRL IN USE

The Bank of Japan

Financial services companies in Japan have been reporting monthly data in XBRL to the Bank of Japan (BoJ) since February 2006. The BOJ says the introduction of XBRL for monthly balance sheet information has led to a significant reduction in the burden of data validation and other gains in efficiency. It plans to expand the scope of XBRL reporting and to develop new systems for storing and accessing its XBRL data.

Key features of the BoJ's use of XBRL

- **The BoJ gathers data from some 560 banks and other financial services companies as part of its task of examining and monitoring the Japanese financial services industry.**

- **The BoJ launched its XBRL reporting system for monthly balance sheet data from financial service companies in February 2006. This followed a three-year project which went through several stages, with several revisions of the taxonomy used for classifying the data and a series of test periods involving a gradually expanding number of banks.**

- **The central bank introduced XBRL in order to reduce the effort involved for all parties in providing and collecting data and to improve the efficiency of data handling and analysis. The BoJ also expects that its adoption of XBRL will encourage broader use of XBRL and improve the efficiency of data exchange in the financial data supply chain.**

- **Reporting currently covers a fixed range of data. No individual company extensions to the basic taxonomy defined by the bank are necessary or allowed.**

- **An important aspect is the use of formulae in the taxonomy to help reporting companies and the BoJ ensure that valid data is submitted.**

- **The BoJ has provided a reporting tool to enable submitting banks to create their reports in XBRL. The use of the tool is not compulsory, but all banks have decided to adopt it rather than choosing other software.**

Chief results

- **About 500 financial services institutions are now reporting monthly balance sheet data, after a very smooth introduction of XBRL reporting.**

- **The central bank has seen a reduction of around 30 to 40 pct in the effort involved in data validation, while submitting banks say the use of XBRL has aided their reporting process.**

- **Next steps include an expansion of coverage to annual regulatory reports. This will increase the number of financial data items covered to more than 10,000 from the current 3,500.**

- **The BoJ also proposes to develop new systems which will provide more efficient storage and access to its XBRL data.**

The background

Under its role in monitoring Japan's financial service sector, the Bank of Japan (BoJ) oversees some 560 financial service companies, including major and regional Japanese banks, foreign banks and securities firms. Efficient gathering of data from these companies is critical to its supervisory task. Improvement in the efficiency of the data exchange within the financial data supply chain is also a key goal of the central bank.

Before the introduction of XBRL, financial service companies filed to the BoJ through electronic data files prepared with their proprietary software. Data was uploaded and checked in the central database at the BoJ. Database administrators discussed discrepancies with submitting banks and then rekeyed corrected data into its system. This process did not support efficient validation of data by the filing companies and was time-consuming and error prone.
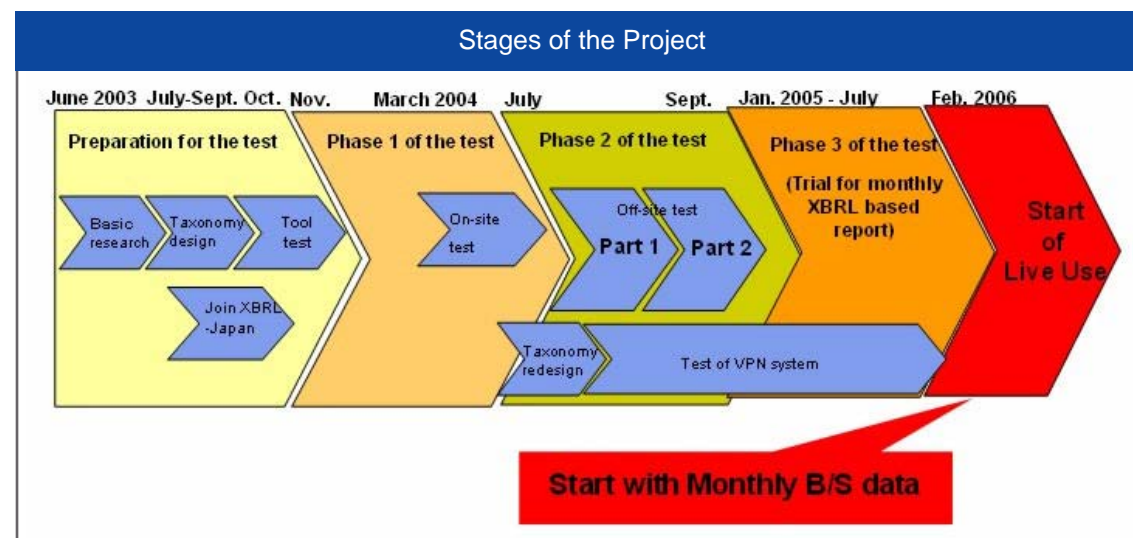
The BoJ identified XBRL as a way of transforming its monitoring process and set two key goals for a new process:

* Increase the efficiency and accuracy of data gathering.
* Reduce the effort involved in submitting, validating and handling information.

The BoJ then involved four major Japanese banks, which are members of XBRL-Japan, in a small controlled trial. Throughout the project, the BOJ funded all central development, but relied on banks to provide volunteer effort for testing.

Based on satisfactory results from the trial with large banks, the BoJ called for volunteers for an open test. Some 31 local banks offered to take part in this new phase of testing which began in the third quarter of 2004. After a set of briefing meetings and the provision of manuals and other guidance, the volunteer banks created an initial set of XBRL data and also started trialling the delivery of XBRL files over the BoJ's virtual private network system (VPN). The BoJ also upgraded its taxonomy to be in line with the latest version of the XBRL Specification and to take account of feedback received during early testing.

For a final phase of testing in 2005, the BoJ took two important steps. After a final revision of the taxonomy, based on further feedback and experience, the BoJ called on major banks to take part in six-month test of the business flows involved in the monthly reporting process. It also decided to provide a XBRL report creation tool to make it as easy as possible for financial services

XBRL filing process

Financial services companies filing to the BoJ convert their report data into XBRL from Excel at the final stage of reporting. All have chosen to use the XBRL report creation tool provided by the BoJ, although they are free to use other XBRL creation software if they wish.

Key features of the reporting tool, BOJ-X-Port, are:
* Its features and user interface are adapted specifically for BoJ reporting requirements.
* It provides a simple means of converting Excel input to XBRL output.
* It enables validation of data using formulae included in the taxonomy.
* It allows submitters to insert comments on validation errors and changes of accounting policy.
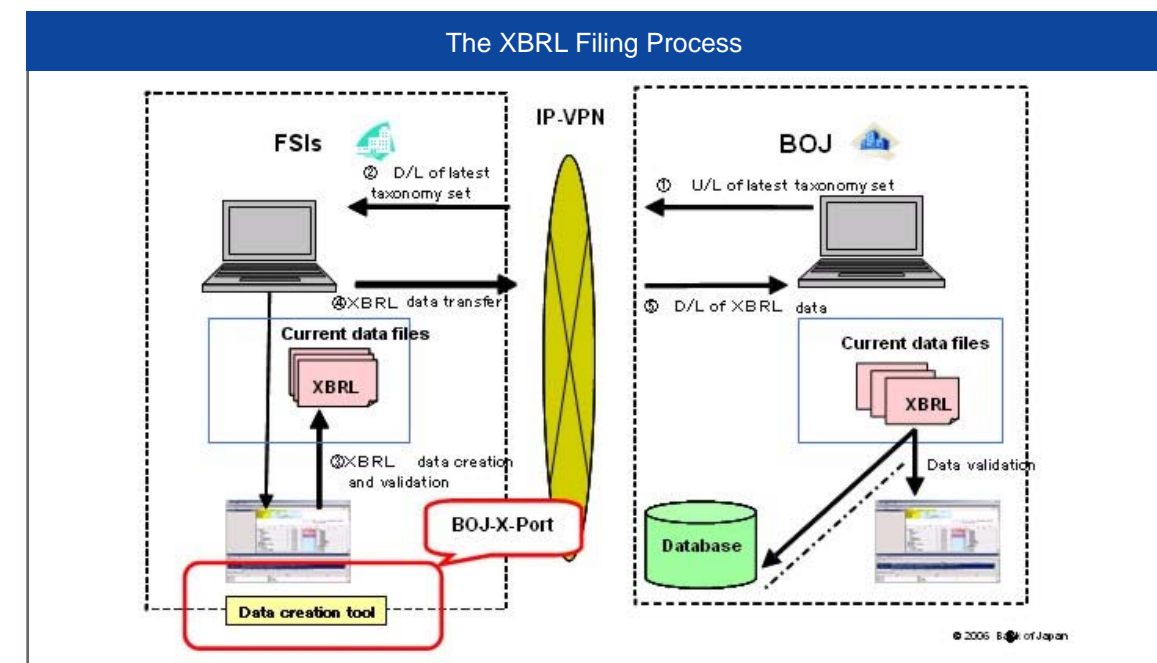* It is designed to be very easy to use for those unfamiliar with XBRL.

An important aspect of the BoJ monthly reporting taxonomy is that it includes formulae to help submitting institutions and the central bank confirm that submissions are valid. The formulae, which are fairly simple, have been defined using the draft XBRL Formula Specification. The taxonomy, with some 3,500 elements, covers the full set of data which has to

Results

The BoJ has declared its XBRL project a success, finding even in its initial months of operation that the use of XBRL had reduced the effort involved in data validation by between 30 and 40 per cent. Data validation has been a major burden on the central bank, accounting in the past for significant effort between the submission of a report and its release to users.

Submitting banks have also welcomed the introduction of XBRL, saying that it has helped their submission process - particularly in enabling them to validate their reports and easily identify problems prior to submission.

An important feature of the XBRL filing process and reporting tool is that it is possible for submitters to comment on and explain apparent validation errors with their report. For example, precision and rounding issues may cause errors to be signalled which are not in fact genuine problems with the report. Submitters can identify such errors in advance and add a specific explanation to their filing, significantly reducing the effort involved in raising and responding to enquiries.

Stages of the Project

The XBRL Filing Process

The implementation process

After recognising the potential of XBRL, the BoJ started planning a project in the middle of 2003 and joined the XBRL-Japan jurisdiction of XBRL International a few months later. Following research into how it could best use XBRL to achieve its goals, it decided to focus initially on monthly reporting by financial services companies, which is smaller in size and scope than annual reporting.

Its first main step was to draw up a draft taxonomy classifying its monthly report data, which is primarily balance-sheet type information. The taxonomy has to cover some 3,500 data elements, organised into appropriate sections.

Initial testing, after drafting the taxonomy, centred on the practical use of various XBRL software tools.

companies to submit XBRL reports. The tool is based on the XBRL software provided by a major vendor, but is adapted to the filing requirements of Japanese banks. The BoJ specified its requirements for the tool and selected the vendor through a request for proposal (RFP) and tender process. The tools was developed, tested and accepted over a period of three months and the BoJ offered it free of charge to all reporting companies.

After successful completion of this phase, the BoJ set a target live date of February 2006 and began a programme of information and training seminars.

After a full-scale trial filing of monthly reports by some 500 financial institutions in January 2006, the service went live on schedule in the following month.

be submitted. No taxonomy extensions by individual companies are required or permitted. The taxonomy set includes a presentation and a calculation linkbase. The BoJ is not making the taxonomy public, releasing it only to reporting companies.

Reporting institutions can download the latest version of the BoJ taxonomy over the BoJ's virtual private network (VPN) and file their submissions over the same network.

The BOJ expects periodically to update the monthly reporting taxonomy in line with changes in regulations and reporting requirements. It also runs its own separate validation processes on submitted reports within the central database.

Lessons learned

The BoJ XBRL project benefited from thorough planning and testing. The BoJ went through several phases of testing, ensuring representative samples of the key users - the submitting organisations - were fully involved.

In early phases of the project, the BoJ identified that it was necessary to ensure prospective filers were well informed on plans and requirements. As well as providing manuals, it made briefing visits to companies involved in early testing and ran seminars in later stages for all potential submitters.