Handbook: EDP Examination Handbook
Subjects: Purchased Software Evaluation Guidelines

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Purchased Software Evaluation Guidelines

RESCINDED

> *Summary:* This Bulletin alerts the board of directors and management of thrift institutions to potential risks and control issues in purchasing vendor software. It provides general guidelines for evaluating vendor software packages prior to their acquisition.

For Further Information Contact:
The FHLBank District in which you are located or the Compliance Programs Division of the Office of Regulatory Activities, Federal Home Loan Bank System, Washington, DC.

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Background/Concerns

In recent years, there has been an increase in the number of companies developing and marketing software systems to meet the data processing and information needs of the thrift industry. Software packages can be obtained from a variety of sources such as large EDP system manufacturers, software vendors, and accounting firms.

There are potential risks and control issues that should be addressed when institutions consider the purchase of software systems. Some institutions have found that software does not work as expected, is not adequately supported by the vendor, or requires costly changes in existing data processing systems that were not identified prior to purchasing the software. These situations can occur if the institution lacks management guidelines for evaluating software packages or if it does not have the expertise to perform these evaluations.

For example, poorly defined user requirements may result in the selection of software that does not meet the needs of the institution, or a weak cost-benefits analysis may not identify all direct and indirect costs of installing a software package. In other cases, an ineffective financial analysis may fail to evaluate the capability of the company to support the software after installation. As a result of these and other weaknesses, institutions can incur significant costs for software or hardware modifications that were not considered or brought to light in the evaluation process. In some instances, institutions have elected not to implement newly purchased software, resulting in a monetary loss to the institution.

Policy

The board of directors and management are responsible for ensuring that policies and procedures are in place and that resources are available to properly evaluate the risks and control issues of purchased software and vendor companies prior to purchase.

Guidelines

The following guidelines are provided to assist the board of directors and management in evaluating software packages and vendor companies prior to purchasing software. They are recommended for significant software purchases or when the software will support critical aspects of the institution's operations. These guidelines identify the type of studies or analyses that should generally be performed to improve the evaluation process and reduce the risk of the software not meeting the needs of the institution. In cases where there are limited alternatives for purchasing software such as single vendor applications, or operating system software designed for selected manufacturer's hardware, portions of the guidelines may not be applicable.

User Requirements Analysis

It is generally appropriate to analyze user requirements before evaluating vendor software packages. This analysis should usually define the business reason for purchasing software, deficiencies of the current system, user and data processing requirements, user and management reporting requirements, system interfaces to other systems, and the in-house resources needed to install and maintain the system. User, Data Processing, and the Audit Departments should generally be involved in this analysis. The resulting document will provide a basis for evaluating vendor software packages.

Cost-Benefit Study

After the user requirements analysis is completed, the direct and indirect costs of installing and maintaining purchased software should be compared to other business alternatives such as the use of service bureaus, modifications to existing applica-

tions, or manual systems. The capabilities and costs of each alternative should be analyzed and compared in a common format. The purchased software alternative should include the costs of modifications to existing data processing systems and expected return on investment.

If the results of the user requirements analysis and cost-benefit study indicate purchased software is cost-effective and the preferred solution, the following factors should be evaluated.

Financial Stability of the Company

The financial statements and resources of the software company should be analyzed to determine if the company is financially sound and has the resources to support and maintain the software package during its estimated life span. This analysis is especially important if the vendor is responsible for future modifications to the software programs. In these cases, procedures should be established to analyze the financial statements, performance, and stability of the company on an annual basis.

Contract Review

The software company's contract should be carefully reviewed by appropriate management and legal personnel to identify potential risks for the institution. This review should identify the contract deliverables, scheduled delivery dates, method of delivery, documentation, and other key contract terms. It should also include the obligations of the software company to support the software after purchase, furnish updates, and arrange for supplying the program source code and documentation if the software company goes out of business. The provisions for terminating or extending the

contract should be clearly spelled out. Recourse for monetary losses as a direct result of errors in the software should also be considered. Requirements for annual financial information, preferably audited, should be incorporated into the contract.

Institutions making a substantial investment in new software should consider including in the contract the right of internal audit staff and FHLB examiners to perform examinations of the software companies for risk and control issues relating to the software purchase.

User References

User references are an important source of information in evaluating vendor packages. A user reference list of other institutions using the software package should be obtained from the vendor. These companies should be contacted to obtain information such as the software package purchased, the computer system used to run the software, modifications that were made after installation, the length of time in use, the quality of vendor conversion support, performance on similar hardware, and other pertinent information.

On-site visits to other institutions that have installed the software on a similar computer system should be considered before making a substantial investment in a software package. Care should also be taken in purchasing software that has not been installed and thoroughly tested in other locations.

Audit and Security Considerations

The software package should be reviewed for security controls and audit trails such as access to data files, authorizations, password con-

trols, data access logs, reporting of security violations, and capabilities of utility programs to alter data.

Life Span of the Product

The age of the software, the number of updates issued since it was developed, the software vendor's plans for future modifications, and the useful life of the package should be evaluated against the institution's short- and long-term business plans.

Documentation

The documentation and manuals provided with the software package, and on-line help programs if the system is interactive, should be carefully reviewed by Data Processing and User Departments for content, readability, and completeness. This review should include input forms and output reports, compliance with in-house standards, and documentation provided with modifications.

Testing

Vendors should test all parts of the system in a systematic manner. Information on the testing procedures performed by the vendor should be obtained and evaluated. This information should include test plans, the hardware used for testing, and the method used to verify that the software calculations meet regulatory requirements, e.g., Truth In Lending disclosure calculations.

Conversion Assistance

The background and experience level of software company personnel assisting the institution in conversion planning, support, and training activities should be obtained and evaluated. The vendor should provide a detailed schedule of pre- and post-conversion support activities

with associated costs. Conversion support materials should be carefully reviewed for quality, readability and completeness. The software company internal resources required to support conversion training should also be evaluated. The quality of conversion support provided by the vendor should be verified when checking user references.

Maintenance Support

The capability of the vendor company to provide timely, on-going maintenance support for user programming requests, product updates and regulatory changes should be evaluated. The content, frequency and costs of previously issued software updates should be reviewed. The software should also be evaluated for report-writing capabilities that permit in-house personnel to produce new or specialized reports for management, user departments, or to comply with regulatory requirements. If vendor programming is required for report modifications, these costs should be considered in the evaluation.

Software Installation

After evaluation and selection of a software package that meets the needs of the institution, the software contract should be approved by senior management. Management should provide for an effective project control system to facilitate planning and implementation of the software. Liaison personnel should also be designated to manage the vendor relationship and coordinate the software installation.

— Darrel W. Dochow, Executive Director