TREASURY SYSTEMS

A Treasurer's Guide

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INTRODUCTION

Change is a constant in corporate treasury and is probably greatest in the area of treasury technology. The speed with which business functions have moved from centralized mainframe systems to servers and to the cloud is one part of this evolution. Another is the scope of treasury activities impacted by technology. The simple Treasury Workstations of the 1980s that handled bank balance polling, FX, debt and investments have expanded to enterprise wide Treasury Management Systems that also account for complex derivative transactions, global liquidity structures, risk management and compliance. Significant advances in technology have also paved the way for closer integration with corporate ERPs and single-function systems for escheatment, hedge accounting and valuations.

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Selecting the right approach for your company will depend on clearly defining the required functionality for your specific needs and this should be coupled with an understanding of the current and future systems environment. A combination of treasury focus and IT guidance in system selection turns risk into opportunity that can improve the bottom line through optimized liquidity and risk management along with improved control and operational efficiency.

This paper deals with the different types of treasury systems and how they can fit within a corporate treasury. The principal focus is on how to determine the technology approach that is right for a particular treasury department given the required functionality and systems environment.

FUNCTIONALITY

The first step in determining required functionality is an assessment of the processes used to manage global liquidity and risk. Many treasuries use a combination of bank reporting systems, spreadsheets and third party packages for specialized requirements. These hybrid approaches get the job done but often require a lot of manual work. This leads to the temptation when considering a TMS to think of it as automating current processes. Automating will likely result from implementation of a TMS but the underlying processes should be examined before they are replicated. One way to do this is to define the user base and their key requirements; what must they have and what would they like to have.

Determining the essential components of a TMS requires discipline because the broad array of options from the technology providers can tempt the treasurer into creating a complex and expensive system, many parts of which may never be used. The best approach is to form a multi-disciplinary team including representatives from systems, accounting, treasury and operations to develop a set of business requirements.

Begin with the primary treasury tasks that are currently performed, their frequency and importance. The following matrix can serve as a starting point:

Task	Frequency	Importance
Daily cash management including cash positioning, funding and investment	Daily	High
Bank management such as account management, pricing and service negotiations and signatory management	As required	High
Liquidity management including credit facility management, tax optimization, integration with business operations and investment guidelines	As required	High
Risk management such as the identification and handling of risk, hedging and coordination with accounting	As required	High
Working capital management	As required	High

Having identified the major tasks that the system is expected to handle, the team can then review basic TMS functionality in order to fully develop the business requirements. Common categories include:

1. Cash management
2. Payments
3. Financial transactions
4. Accounting and bank management

Cash Management

Bank Reporting

Bank reporting refers to the gathering of BAI2, MT940 and MT942 type information from the company's banks for previous day and current day reporting. The TMS collects this information through direct bank connections, SWIFT or a local VAN. The value added by the TMS is that it eliminates the need for the company to use locally deployed bank communication tools or manage the connectivity process, which relieves a large burden from IT. Some systems also provide visibility into the daily and intra-day process of collecting the data, so users know if certain banks have failed to report, if files are incomplete or if there was a problem related to login credentials.

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Bank information is the life blood of a TMS system and regardless of how the data is received, the real power of a TMS is the ability to pull the data and compile, configure and relate it to financial transactions, liquidity structures and other treasury elements relevant to a particular organization.

Cash Positioning

A TMS should have the ability to prepare and reconcile the company's daily cash position based on bank reporting input and cash forecasting information imported or directly entered into the TMS. Depending on the dynamic nature of the system this provides a real-time view of positions across banks, accounts, entities, and regions. This is not reconciliation in the accounting sense where each transaction is matched with the banking entry. Rather, for treasury

purposes, the reconciliation process facilitates cash positioning so that cash funding and hedging decisions can be made quickly. It is common to find tools built into TMS systems to match forecasted and actual transactions within defined tolerance ranges, not exact amounts—key for the treasury, but not used for accounting.

Cash Forecasting

Cash forecasting is an area of critical importance for most companies and a good example of where technology can provide significant benefits for treasury. The TMS will be able to accept direct input of forecast data by financial teams in a variety of locations, import data from the ERP or a data warehouse and perhaps extrapolate based on past results. Validating and consolidating the various inputs improves both quality and ease of forecast assembly.

The manner in which all this data flows into the TMS is an important technology consideration. Most of the providers of cash forecasting information are field accounting operations which do not report to treasury and may not necessarily have direct access to the TMS or have limited interface permissions to the TMS itself. Accordingly some of the data may be obtained by automated import from an ERP via IT, directly into a user input screen via subsidiary finance managers or imported from a single-purpose system, such as a trading portal.

Cash forecasting is an integral component of how a centralized treasury plans for the funding needs of its global subsidiaries and then facilitates moving cash through the internal entity infrastructure. Some TMS platforms provide robust functionality to monitor and oversee the forecasting process and accuracy of the data being input by subsidiary finance managers, which in turn can provide a feed-back loop to those subsidiaries on the efficiency of their cash management activities.

In-House Banking

In-House Banking, or IHB, refers to the company acting as a bank for a group of the company's operating businesses. Functions performed by an IHB can include cash pooling and foreign exchange. Having a technology enabled IHB enables companies to benefit from the

disintermediation possible with an IHB without developing a large and expensive infrastructure to administer the operation.

The IHB is the treasury structure that enables more strategic and flexible cash management for global-oriented businesses. IT is the mechanism that provides the ability to centralize cash management and without a technology solution, the benefits of IHB would be very difficult to achieve.

Payments

Basic Payments

Meeting compliance and documentation demands for payments can be daunting and time-consuming. This is an area where technology can be helpful, but it is important to think through the ultimate objective. Do all the payments have to go through the TMS? To what degree is it prudent to extend system access for the payment workflow process to users who are not part of treasury? Often companies use the ERP for A/P and payroll and the TMS for treasury transactions—such as interbank flows, funding, investing, and hedging activities. In addition, a TMS can integrate payments functionality with financial transactions allowing, for example, interest payments on debt instruments.

If it is determined that the TMS will be used for the bulk of payments, the module needs to provide a workflow for payment approval and release while handling regional requirements such as SEPA compliance in Europe and local formats such as CNAB in Brazil. In addition the module needs to accommodate multiple banks and support this connectivity with timely acknowledgements of transactions processed.

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Payment Factory

Shared Service Organizations (SSOs) often centralize payments for the company on a global or regional basis. This requires special workflows that are included in the functionality of some Treasury Management Systems. Although this is considered to be very sophisticated functionality, where it is achievable in a TMS and an organization, it enables treasury to be a strategic partner with AP in the SSO.

Netting

Multilateral netting is an ideal tool for managing intercompany payment activity on a cost effective basis. Most TMS offer some form of netting system capable of operation on a payables, receivables or hybrid basis. Netting is also a common function for Best of Breed systems.

Financial Transactions

Debt

Multinational companies use numerous types of debt instruments and can benefit from a single system to manage debt and related derivative transactions. These include portfolios of short and long-term borrowings at fixed and floating rates along with lease contracts, all with special features, such as calls, puts and custom amortization schedules.

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Investments

An investment module supports the tracking and management of investment activity. Typically users can manage portfolios of short and long-term investments, including money market funds, interest-bearing, fixed, floating rate and amortizing contracts. As with debt, a limited amount of investment functionality is incorporated in the base package. An additional module may be required to handle specialized instruments.

Foreign Exchange

A TMS can manage basic spot and forward FX transactions, and will generally support the tracking and management of non-deliverable forwards, plain vanilla and barrier options. Transactions can be imported from single or multi-bank portals to help in reconciliation and eliminate re-keying. Depending on the TMS, hedging and hedge effectiveness testing can be performed and mark to market valuations calculated.

Intercompany

The intercompany module tracks intercompany loan activity based on formal or informal notes from parent to subsidiary or between entities. The ability to track both sides of the transaction including cash flows, settlements, and resulting accounting entries is helpful in documenting this activity and essential when treasury activities generate a significant volume of these transactions.

Accounting and Bank Management

GL Posting and Reconciliation

Transactions created by or imported to the TMS can be entered into the GL through the generation of dual and multi-sided entries from bank and internal transactions within the system. Some systems support the independent reconcilement of bank transactions to accounting entries. Bank transactions imported each day are matched against accounting entries imported from the General Ledger based on user-defined rules for a true bank-to-book reconciliation.

Bank Fee Analysis

Some TMS vendors offer analysis and monitoring of bank fees. This capability is also available from certain specialized vendors but primarily for US banking which uses relatively standardized AFP categories for fee categories. This US approach is becoming more common for global treasuries that take advantage of TWIST standards. The functionality allows users to analyze and reconcile bank fees to compare monthly fees against internal benchmarks.

Bank Account Management

Good treasury practices—and SOX compliance—require a firm handle on details of bank accounts, including signatories. Many systems offer a complete review and approval workflow to manage signature authorities for all accounts and produce the appropriate management, bank, and compliance reporting.

At this point in the assessment process there will probably be a high level of optimism within the team as members see how their work may take less time, be more accurate and enable the treasury to capitalize on market opportunities in FX and investment with the implementation of a TMS. This enthusiasm should be tempered by two realities: the budget for the TMS and the need to have the TMS fit within the corporate systems environment.

SYSTEMS ENVIRONMENT

Systems environment refers to the matrix of hardware, software and support that exists within the company. The typical company has large systems such as the ERP for corporate accounting and some operating functions, medium-sized systems for CRM (Customer Relationship Management) or a data warehouse and smaller systems for managing tax compliance or other specialized purposes. Usually systems are installed on company servers, powerful computers that can handle the computing requirements of multiple users. These systems are typically referred to as installed systems.

In other cases the system can reside on a third party server, which company users would access through some type of network. The hosts of this type of system are often referred to as ASPs or application service providers. Another option is where the developer of the system hosts the application itself and provides the software as a service, or SaaS.

The reality of corporate systems is that simple concepts are quite complex because technology changes, businesses grow organically and through acquisitions, systems require time to implement and vendors merge. So the typical company may not be using the latest version of a single ERP configured to the current business mix, installed at a single location and accessed by all users over a proprietary high-speed fiber network supported by technicians who are fully trained on all aspects of the system. The role of the corporate Chief Information Officer, or CIO is to manage the gap between concept and reality providing the benefits of the latest technology while protecting company assets and operating within a designated budget.

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This results in a general set of rules and requirements that will govern the team selecting the TMS. These need to be understood by the team, built into the selection process and negotiated where necessary. Examples of the rules and requirements include:

SOLUTIONS

- Computers and peripherals used on company systems must be purchased and configured by corporate.

- Non-employees may not access corporate systems and employees signing on to corporate systems while travelling must do so through a virtual private network, or VPN.

- Vendors providing technology services to the company must describe the controls they have over their services and submit these controls to audit by an outside party.

- Certain types of data cannot be stored or managed on servers not owned by the company.

Depending on the company, the list can be quite extensive. The implications for the TMS selection team might be that if the company prohibits the storage of financial data outside of the company then an ASP or SaaS type TMS is not feasible. However, this thinking is changing as more companies accept that the security surrounding off site hosting has vastly improved over the past few years.
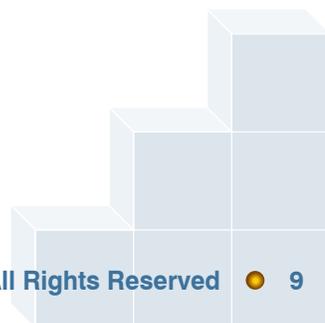
BUSINESS REQUIREMENTS

By now there will be a sense of the tasks the system must perform based on current requirements and available functionality in the market. The team should also have a good understanding of the environmental requirements into which the system must fit. The next step in the process is the development of a detailed set of business requirements for presentation to management. These generally follow a format specified by the IT department. Some suggested elements may cover:

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Introduction and Scope

The introduction defines the purpose, scope and benefits of the TMS. For example:

- The TMS will be used for cash positioning, bank account management, payments, cash forecasting and controlling intercompany loans related to cash pooling.

- The TMS is expected to integrate all of the treasury activities of the business entities within scope and act as a central point of integration with the company's ERP, banks and associated financial activities.

Scope defines the geographic, business or other parameters that determine which of the company's businesses will be using or impacted by the TMS. For example:

- In scope entities include all businesses in North America, EMEA, LatAm and Asia Pacific.

General Requirements

This section outlines general expectations for the system. Examples include:

- Library of standard reports including the capability for users to customize reports to their requirements
- Complete holiday calendars for all of the in-scope countries
- Availability in English, Spanish and Portuguese

- Must provide a dual-factor authentication for all the users with authority to approve payments within the system

- Support interface with SWIFTnet, Oracle and SAP

Functional Requirements

In this section, it is common to list the financial functions, or tasks, that will be performed by the TMS. Examples include:

- Connectivity and integration

- Cash visibility

- Bank account management

- Cash positioning

- Cash forecasting

- Cash pooling

- Payments approval and execution

Each of these areas is then defined in further detail. Following is an example for connectivity:

- ERP sends approved payment files to TMS at 0800 and 1500 each business day.

- TMS sorts files by bank and prepares payment files for each bank within 15 minutes of receipt and then sends to the banks no later than 30 minutes following receipt from ERP.

- Banks acknowledge file receipt within 15 minutes of transmission and users see this acknowledgement in the TMS. TMS will report unacknowledged transmissions.

- Banks confirm that the files have begun processing within timing to be negotiated.

- Banks report transaction status through MT942 within 15 minutes of successful file processing.
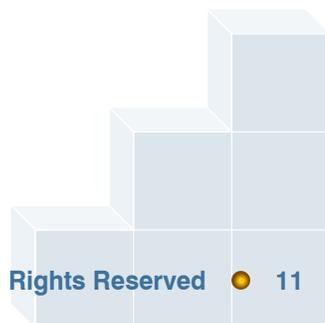
Market Scan

The purpose of the market scan is to develop a list of prospective suppliers based on the business requirements and vendors operating in the market. Using information from public sources such as the web and networking with experts in the field, a list can be assembled of the major players that can broadly meet the company's requirements. The market scan also provides general information about the financial stability, market share, product range and other attributes of potential vendors.

TMS suppliers fall into three broad categories:

1. Modules from the major ERP suppliers

2. Specialized software companies that operate independently or as divisions of larger companies

3. Bank developed or supported white label systems

ERP modules offer excellent integration with the company's ERP and a familiar infrastructure for the IT department. The functionality of these systems has improved dramatically since their first introduction but they are typically developed from an accounting perspective and therefore lack many of the features that are necessary for the corporate treasurer. This leads to significant customization by the company or their ERP consultants adding complexity and cost to the system.

Specialized developers offer exceptional functionality and can be quite willing to customize their product to company specifications. The major suppliers offer a range of solutions for most price points and are very aggressive in marketing their offerings. However, because this segment of the market is ferociously competitive and consolidating rapidly there is the risk that a particular product may not have a sufficient installed base to survive or continue development.

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Most banks offer the basic web portal for balance reporting, transaction execution and other functionality including FX trading and trade finance. These portals have limited multi-bank capabilities and so do not generally serve as the main TMS for any but the smallest company. Some larger banks have developed or offer on a white label basis more robust functional systems with comprehensive multibank capabilities. These offer the advantage of bank support and commitment with the disadvantage of binding the company to the bank for the long term and sending this message to the bank's competitors.

TMS from the ERP vendors are often preferred by the IT department while treasury finds the functionality of systems from specialized developers to be closer to their needs. Bank systems are tempting because of perceived simplicity and lower cost, but are often not the best choice for a treasury with multiple requirements and banking relationships. Whatever approach is ultimately chosen it should be chosen through an orderly and disciplined selection process.
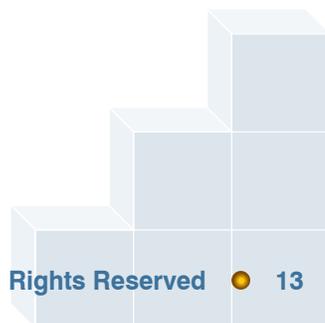
SELECTION

There are two parts to the selection process for a TMS, the RFP and evaluation of the responses. The RFP is the structured tool provided to prospective vendors and designed to obtain information on how the vendors can meet the company's business requirements and at what price. RFPs are covered in greater detail in *The Request for Proposal Process—A Treasurer's Guide* available at **www.treasuryalliance.com**.

Evaluation

Evaluation is the process of reviewing, comparing and analyzing vendor responses. TMS proposals differ from many other types of proposal due to the greater specificity of the business requirements. Companies need to see and understand how a TMS performs a particular task using their data and in their environment. For this reason the high level demonstrations that some may ask for are not particularly useful for anyone.

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1. The RFP response

2. A scripted demonstration

The RFP response should be read carefully and scored on a common basis with the other responses. Important factors for most companies include: financial stability of the vendor, size of installed base, ability to meet business requirements and price. A properly designed RFP will provide the required information on these factors.

Scripted demonstrations are where the finalist vendors show—as oppose to describe—how their systems will address the company's business requirements. The company supplies each vendor with the same set of tasks and data and observes the workflow and the result. Demonstrations can last from half a day to more than two days depending on the complexity of the system requirements.

Potential tasks include:

- Enter forecast data for a sample of five selected currencies/businesses. Output should be a consolidated cash forecast.
- Provide five intercompany loan documents and have the TMS calculate the interest payments to term based on the loan terms.
- Create notional accounts for a set of businesses and have the TMS create the money movements required for a pooling effect.

The key criteria for including tasks in the scripted demonstration are those that are of critical importance to the company. The vendor should demonstrate how their system would perform and handle each task.

Final pricing negotiations follow the evaluation. There are two important points to make:

1. Insure that the vendor cost the system as you will install it including firm estimates of implementation consulting and the annual run costs.
2. The market for treasury systems is very competitive so while price should not be the most important selection element all vendors have considerable latitude in their pricing.

The completion of the selection process does not signal the end of the work involved but the beginning of a new phase in the project—implementation.
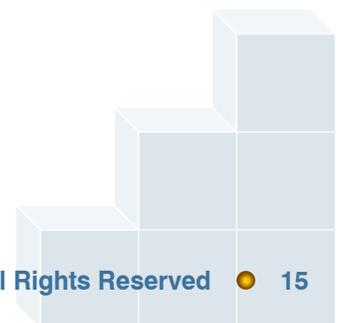
IMPLEMENTATION

Implementation is a complex process that integrates resource management, IT issues, solution modeling and systems architecture among other elements. Following are some of the critical elements of the technology implementation process that a treasurer should be aware of:

- **Objectives and Project Scope**—Before beginning the implementation, it is important to document the objectives and project scope. The objectives should speak to outcomes, while the project scope would describe how the outcomes would be achieved. For example, one objective might be to achieve global cash visibility for all bank accounts and the related project scope might be to implement bank connectivity and configure cash management in the treasury system.

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- **Budget, Resources and Timeline**—The vendor will propose a detailed project plan, based on the project scope, which should include a proposal for budget, resources and timeline. Most importantly, the treasurer should appoint a dedicated Project Manager who ideally possesses a combination of Treasury, IT and Project Management skills. This Project Manager will work closely with the vendor and internal stakeholders and external parties, such as banks, throughout the project and be responsible for implementation meeting the objectives. In addition, the treasurer should also create a working group for the project. This does not require full-time participation from the members but should be included in their job responsibilities to ensure that it is taken seriously.

- **IT Environment**—For installed solutions, IT should be engaged early in the process to determine and setup the technical environment. Some issues that need to be coordinated between IT and the vendor include whether the application is installed locally on all user machines or on an application server and if remote users access the system through a web application or directly and which database will be used.

SUMMARY

Treasury systems have come a long way and now meet the needs of different types of user. The advent of the cloud has facilitated the use of vendors that can provide solutions that are quite cost-effective for smaller companies. At the same time technological innovation and experience has paved the way for vendors to provide the breadth of scope that a very large treasury would require. Industry growth has also resulted in a measure of instability in the vendor market that requires careful attention so as not to strand the user with an obsolete system. The benefits offered by TMS have never been greater and the risks, while real, are manageable. Companies that follow a structured process and focused vendor evaluation, will ensure that the risk/reward equation works in their favor.

ABOUT TREASURY ALLIANCE GROUP LLC

TREASURY ALLIANCE GROUP consults with clients globally in the areas of treasury operations, banking, payments, technology and risk. With decades of experience our consultants deliver practical, realistic solutions that meet each client's unique requirements. We welcome the opportunity to discuss how our consulting can help meet your challenges.

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