

AFP® GUIDE TO

Global Visibility of Cash

Global Liquidity Guide Series

Issue 4

Underwritten by





AFP® GUIDE TO **Global Visibility of Cash** Global Liquidity Guide Series

Welcome to AFP's Liquidity Management Guide to Global Cash Visibility.

The events of the past five years since the financial crisis have reaffirmed for many treasury departments the critical importance of prudent liquidity management. Clearly, visibility of cash is core to the process. In many companies, cash and liquidity reporting has been elevated to the board, the CFO and across senior management. Companies use it as a means of unlocking working capital, besides showing the value that a treasury department can bring to an organization. Better visibility of cash on a more frequent basis and in a streamlined process affords treasury departments the ability to be more proactive in terms of risk management for the organization. As difficult events continue to unfold globally, as for example in southern Europe, global treasury departments continue to step up to meet those challenges head on, while being tasked with doing more with less. This translates into adding more throughput to their existing technology, working smarter through their banking providers, or enhancing their cash forecasting by educating themselves and partnering with

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“Learn from this Guide in terms of understanding what the possibilities are, and work with your providers to unlock them – there is tremendous upside for your effort.”

different departments within the organization. These are just a few of the ways treasury departments are addressing these challenges. For treasury departments that are in the process of expanding globally to companies that have very well defined global processes, the call to action remains clear – risk management is a key focus on cash, and cash visibility in a timely manner is paramount.

This Guide looks at the drivers for achieving global visibility of cash, identifying the main techniques and the main barriers to using them. The Guide also focuses on the key stages in implementing a solution to meet organizations' overall objectives in this regard. The Guide concludes with an appendix outlining the tools available to improve cash visibility in key markets around the world, and incorporates several case studies from companies that have gone down this path already.

As shown already in the Mobilizing Global Cash Guide, there is no single solution that can achieve cash mobility overall. The same can be said for global cash visibility. Each organization has unique requirements, and no two bank relationships are the same – these require building in flexibility and future-proofing structures over time for optimal visibility. The benefits are well worth the effort. Organizations that have timely access to their visibility of global cash benefit from:

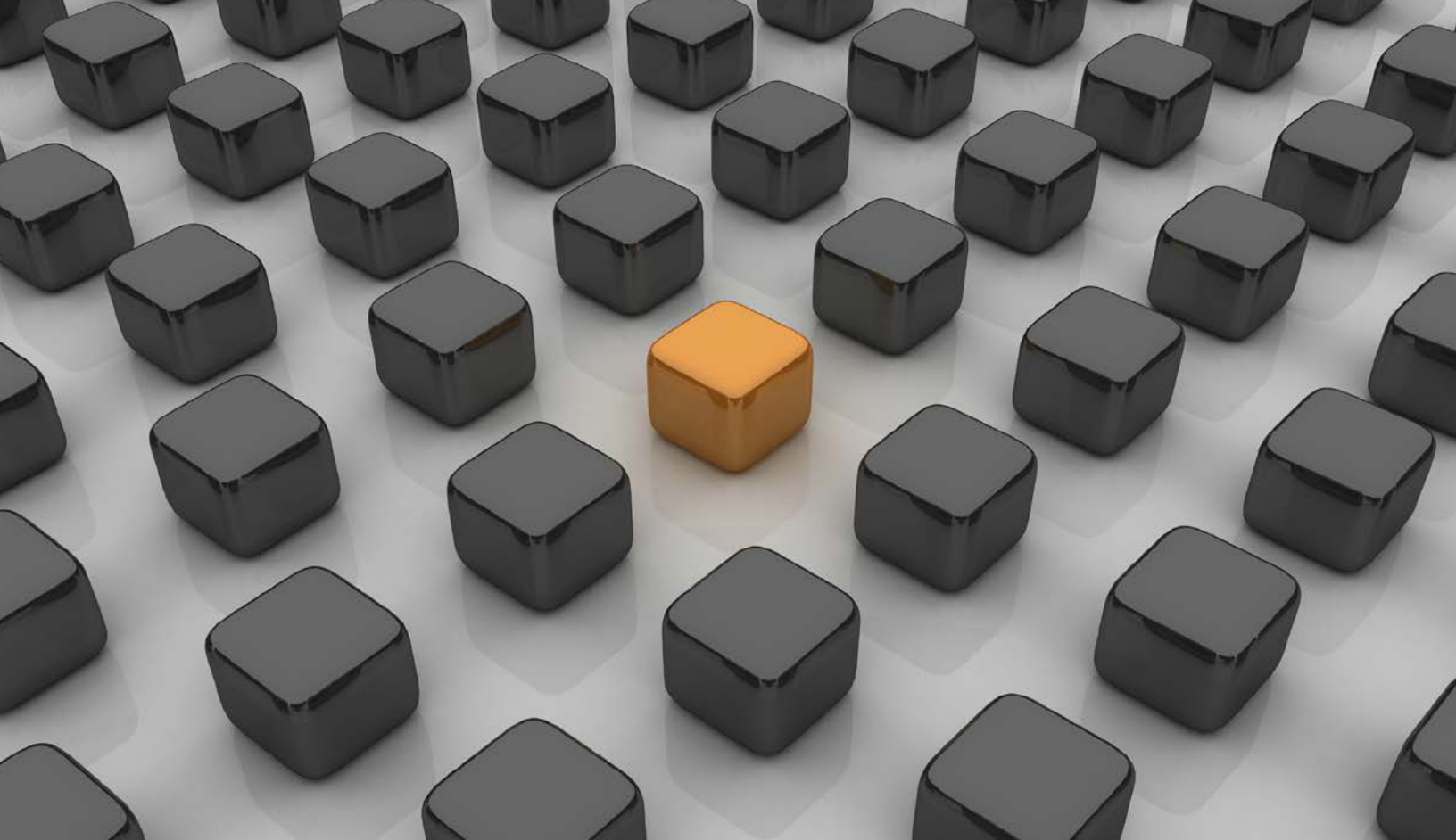
- unlocking untapped working capital
- funding the company internally
- better counterparty risk management
- higher enterprise value and less potential reliance on capital markets
- paired with a strong planning process, better strategic opportunity/utilization of free cash flow to fund acquisitions, stock buybacks and capital expenditures.

Banks, technology partners and industry associations serve as strong allies in the process of augmenting an organization's cash visibility capabilities. Learn from this Guide in terms of understanding what the possibilities are, and work with your providers to unlock them – there is tremendous upside for your effort.

Access to cash starts with knowing where your cash is, and mobilizing it to fund the organization internally. Having a process defined across the organization to achieve 100% visibility on a daily basis is the goal that many companies strive to work towards.

Tom Hunt, Director of Treasury Services, AFP.

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Introduction

Gaining greater visibility of cash is becoming ever more important for international treasury practitioners. Fundamentally, having a better view of cash and cash flows allows an organization to operate more efficiently and with a better understanding of, and therefore control over, risk.

Greater visibility of cash helps the treasury practitioner with two key roles: managing cash, and managing risk. First, it supports the treasury's responsibility to ensure there is sufficient cash available to meet group obligations. It makes self-funding easier and more reliable, as the central treasury has a much clearer view of group cash balances. In the context of the treasury team (along with everyone else in the organization) tasked to 'do more with less', achieving greater visibility means fewer resources need to be diverted to establish positions. More resources are then free to

use those cash positions more effectively. Second, greater visibility allows the treasury team to develop a clearer and more accurate understanding of risk exposures across an international organization. This is important, because it minimizes the risk of failure to achieve the first responsibility. It is also important because it allows the treasury to demonstrate to the board understanding and, in many cases, control over group subsidiaries wherever they happen to be.

This paper looks at the benefits of achieving global visibility of cash, identifies the main techniques used to do so, and outlines the main barriers to using them. The paper then provides a guide to the key stages in implementing a solution to improve visibility of cash which meets an organization's objectives. It concludes with an appendix outlining the tools available to improve cash visibility in key markets around the world.

Why is visibility of cash important?

For most organizations, the idea that ‘Cash is King’, or perhaps even that ‘Cash Flow is King’, is the fundamental driver behind developing a better visibility of cash. Having as accurate an understanding of current and future cash positions and flows as possible allows a treasury practitioner to achieve the fundamental objective of ensuring that sufficient funds are available in the correct currency and at the right time to meet all the organization’s obligations.

Beyond this, greater visibility of cash then allows the organization to operate as effectively as possible. For example, in an environment where some funding streams have been shown to be unreliable, many organizations are placing greater value on the opportunities to self-fund their businesses. In many cases, this opportunity extends to self-funding the supply chain.

At the same time, there are increasing regulatory pressures for corporate treasurers and company directors to be able to demonstrate control over all activities within an organization. While in the past, it might have been good enough to allow

a small overseas subsidiary to provide balance reports every month, this is no longer sufficient. Even in decentralized organizations, the corporate headquarters will recognize that arm’s-length management of overseas subsidiaries cannot exclude clear visibility over cash flows. The center must also be able to demonstrate a complete understanding of its subsidiaries’ financial commitments, as long as the corporation retains financial responsibility for those subsidiaries. Similarly, investors will want to be reassured that the corporate headquarters has adequate control over all its subsidiaries, as part of their own counterparty risk management procedures.

There are certain organizational steps which a treasury practitioner can take to improve the channeling of cash within an organization. The implementation of a cash mobilization structure can help in the management of global cash. Such structures allow treasury departments to link bank accounts together in such a way that cash is channeled to header or master accounts under the control of group treasury. These accounts can then either be funded centrally (theoretically at a lower rate than is available via local markets), or surplus cash can be directed to fund entities with a financing requirement.

JENNIFER DALE, ASSISTANT TREASURER AND DIRECTOR OF TREASURY SERVICES, SPRINT

One of the challenges for treasury is to ensure there is sufficient visibility of cash within the organization. Jennifer Dale explains how Sprint took action to improve internal visibility of cash to free working capital and to improve the accuracy of cash forecasting.

Sprint established a working capital committee with representatives across the business. This included accounts payable, supply chain, FPA, the customer-facing collections team and cash management. The team started by brainstorming to try to identify where working capital might be locked. This involved the group working to understand current practices to establish whether they were in line with the group’s working capital guidelines.

The group established that many of the expectations it held about payment flows and schedules were not being achieved in practice. Dale explains, ‘For example, some business units were directly uploading payment files to the ERP system. These files initiated payments immediately, rather than on the scheduled payment due date. By using this information to reschedule the timing of these payments, actively working within the business to identify and renegotiate payment terms, initiating campaigns to move payments from check to electronic and through several other initiatives, we have been able to unlock about USD 700 million.’ Reviewing internal processes is ongoing, with similar further gains being made.

At the same time, the company took steps to improve its cash forecasting process, focusing on deconstructing the accounts payable line. Dale wanted to move from a forecast which calculated accounts payable as a single line item, to one which provided business unit based category detail as a means to achieve greater accuracy. 'We identified the business units which were responsible for 80% of the company's spend,' says Dale. 'They all currently prepared budget forecasts on a P&L basis and we worked with each one to develop a cash based forecast as well.'

Once this was achieved, treasury could extract a daily schedule of payments from the ERP system. This data could be categorized, for example as inventory or sales and marketing spend, and then analyzed at this level. This has made the cash forecast much more accurate. 'We can now conduct variance analysis which measures the cash forecast against actual figures for 3,300 line items with a value of USD 3 billion monthly. In the past, we had a typical variance of between 5% and 10%. This variance is now consistently below 2% and we can often identify the variance down to the precise purchase order or delayed payments which caused it,' says Dale.

However, one of the challenges for any international cash manager is to make these structures work as efficiently as possible. The greater the number of locations in which the organization operates, the less likely it will be that the organization will be able to implement a single structure which can accommodate all group entities.

This effectively means the treasury team will need to make decisions on how best to manage those bank accounts which cannot be included. There are many reasons why bank accounts are not included in a cash mobilization structure. Treasurers may decide it is simpler to have a structure which covers European operations and a separate structure to cover Asia and the Americas. Alternatively, the organization may try to incorporate as many entities as possible into a single structure (to maximize the potential gain), although this may require some entities to sit outside the main structure, for exchange control or other regulatory reasons. These techniques are analyzed in more detail in the second title in this series, the *AFP Guide to Mobilizing Global Cash*.

All organizations benefit from achieving greater visibility over cash. For organizations operating globally, the potential benefits increase as more bank accounts, denominated in more currencies and located in more jurisdictions are included in any analysis. But, for a project to be successful, it needs to have clear objectives. These will usually be driven, at

least in part, by one or more particular requirements. The most common ones include:

- **Board level requests for more information.** With boards under increased pressure to demonstrate control, members want increasingly detailed levels of information about all group entities. CFOs may also want more detailed information as part of a wider review of corporate financing strategy.
- **Treasurers want more detailed information.** Faced with pressure 'to do more with less', treasurers want to be able to manage liquidity more effectively to minimize external borrowing and ensure any short-term surpluses are invested appropriately.
- **Auditors require demonstration of control.** Similarly, internal or external auditors want treasurers to be able to show they have control over cash throughout the organization.

Whatever the driver for the project, working to maximize global visibility of cash must also be set in the wider context, after the treasurer and the treasury team have addressed two key questions:

- First, what is the organization hoping to gain from better visibility? An organization can use higher quality information to operate more efficiently, and to gain a more accurate understanding of the risks it faces. Each organization seeking to obtain greater visibility will want to translate these general potential benefits into specific required

outcomes, to ensure an effective project. This might be as straightforward as obtaining more accurate cash positions in a number of locations outside the home market, or as complex as achieving a wholesale centralization of cash management in an international organization.

- Second, is this a standalone project which will effectively improve the effectiveness and efficiency of existing structures, policies and procedures? Or is it a subsidiary objective within a wider cash management project? For example, achieving

greater global visibility of cash may be seen as an objective of a project to introduce a new cash mobilization structure and/or to implement a new treasury management platform. On the other hand, it may represent a more gradual evaluation of bank relationships targeted at improving information flow by using expanded technology solutions.

Understanding the key objectives of the project will help the treasurer establish where any compromise on the ideal solution may be made.

What are the impediments to visibility?

Most global organizations hold bank accounts with several banks, usually for a variety of reasons. The most common reason is that even the largest international banks may be unable to provide the full range of services required by group entities in every country in which the organization operates. In many cases, international banks provide services in some countries via an alliance or partnership with a local bank anyway.

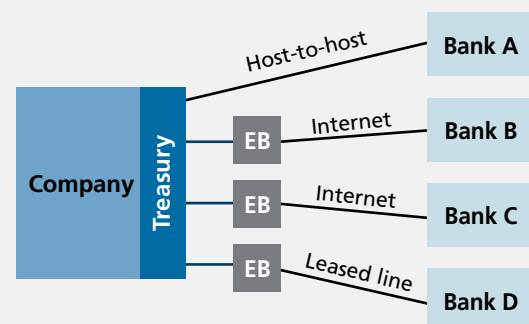
Even if operating with a single bank were possible, many multinational corporations would still choose to maintain more than one cash management bank, for counterparty risk management reasons. Treasurers in these organizations value the efficiencies offered by dealing with a single bank, but will want to ensure they are not overly reliant on that bank for cash and liquidity services. For example, treasurers want to be able to reward banks which extend credit lines, while retaining the ability to benchmark service levels (and fees). At the same time, they do not want to be too committed to a particular bank. Banks change their policies and approaches to particular products or countries for various reasons. Recent experience has also raised the awareness that banks can be subject to financial instability. A treasurer would not want to be in a position to have to change cash management arrangements across a multinational group at short notice.

In other words, although operating with a single bank may make achieving global cash visibility easier, there are plenty of very good business reasons why it is more appropriate to use more than one bank. Using techniques such as a cash mobilization structure may reduce the inefficiencies of maintaining multiple accounts, by channeling cash towards header accounts. (This was discussed in the *AFP Guide to Mobilizing Global Cash*.) However, any structure which involves cross-border movement, and especially movement across multiple time zones and between different banks, will make it much more difficult to gain full visibility over cash. The challenge therefore is to understand what the impediments are to achieving visibility, and then taking steps to reduce or eliminate them.

The fundamental problem is one of inefficient data flow. This can cause problems in both the submission of data and its collation at the treasury center. First, any data submitted from different banks may be incomplete, or delayed. Even when a mobilization structure is in place, the central treasury may not receive full information about cash flows and balances held in subsidiary bank accounts around the world. Some data, especially when it is being collected across different banking groups (and sometimes even when it is from within the same banking group), or from different countries, may be prepared on different bases. The most common differences are the mixed use of end-of-day (usually previous-day) and real-time data. In addition, there can be confusion when cleared and uncleared funds are used together. Understanding the different implications of these variances is an important tool in managing cash.

Second, the collation of data can prove inefficient. Having a series of different methods of communicating with banks will make consolidating positions and obtaining a clear cash position both time-consuming and prone to error. The illustration below shows how an organization's use of different communication channels complicates the process of collating and then analyzing data.

MULTIPLE COMMUNICATION CHANNELS



This diagram illustrates clearly how an organization has the opportunity to reduce the complexity associated with data collection and collation, thus allowing greater opportunity for analysis.

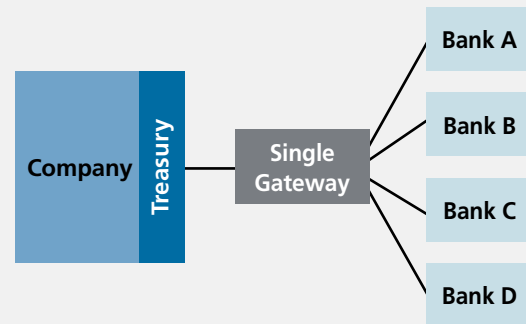
How can an organization achieve visibility?

The diagram above illustrated a common problem in corporate treasury departments: the use of a variety of different techniques to collate data from banks around the world. Because it may be neither practical nor desirable to reduce the number of banks with which the organization deals, the treasurer will need to use other techniques to achieve better visibility over cash.

Ideally, the central group treasury will want to maintain a single channel to communicate with the banks, to ensure data is collated to the same point. This provides the opportunity to build a fully consolidated cash position populated by data which can be interrogated by the treasury practitioners to understand the most effective way of managing cash and risk within the organization.

There are a number of different ways to achieve this improved level of communication. These include using one bank to aggregate data feeds from all the organization's banks, using technology to aggregate data feeds, or connecting to SWIFT either directly or indirectly, via the use of a third party. Each

SINGLE COMMUNICATION CHANNEL



solution requires different levels of investment by the company and offers different outcomes. These are analyzed below.

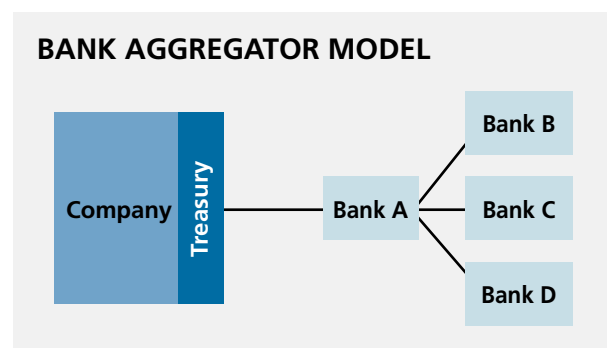
Using bank aggregators

The simplest solution is often to use one bank to aggregate data feeds from all the other banks used by the organization. In this scenario, the organization's cash management bank will receive data feeds from all the other banks with which the organization has accounts. These data feeds are then aggregated by the cash management bank and provided as a single data

SUMMARY OF DIFFERENT COMMUNICATION METHODS

Method of communication	Access via	Major advantages	Major costs	Major risks
Bank aggregator	One bank	Lower cost solution	Testing to ensure data is received from other banks	Lack of control over data feeds from company's other banks. Company reliant on aggregator bank.
Middleware, TMS, ERP	One or more banks	Functionality may already be available or be easily accessible	Possible enhancement to TMS/ERP required	Multiple connections may still be necessary.
SWIFT SCORE	SWIFT gateway	Direct feed into SWIFT	Compliance with SWIFT rules; connection costs	Some banks may not participate in SWIFT.
SWIFT Alliance Lite	Web-based interface	Direct feed into SWIFT without the added IT requirements of a full install	Compliance with SWIFT rules	Some banks may not participate in SWIFT. Only suitable for relatively low volumes.
SWIFT service bureau/member concentrator	Service bureau or member concentrator	Access to SWIFT without IT requirements of a direct connection	Connection to provider	Some banks may not participate in SWIFT. Service levels vary between providers. Company must have appropriate service level agreement.

feed to the treasury management system (TMS). The primary benefit for corporate treasurers is that they receive data feeds from a single location, although they may worry that they lose control over the information provided from other banks.



This arrangement is common when an organization uses one bank for most of its cash management activities, and holds accounts with other banks in those locations where its main cash management bank does not have a presence. This structure is also used where the main cash management bank provides services in those locations where it does not have a presence via a partnership agreement with another bank. For example, a number of US banks use local banking partners in the Nordic countries.

This structure can cause some problems for corporate treasurers. First, there is a risk that the other banks may send bank statements and other information direct to the company, rather than to the cash management bank. This is less likely when that bank is working under a partnership agreement with the main cash management bank. Treasurers can employ tools to detect duplicate statements, to reduce the risk of such events having an impact.

Second, some corporate treasurers will not want one bank to have access to information about the company's activities with other banks. Third, there is also a risk that the data is prepared on different bases by different banks, resulting in inaccuracies when it is received by the corporation. This is less likely when the banks have a formal partnership agreement, as data-sharing will be covered by the agreement. Finally, this can be a relatively expensive way of collating data, especially if the main cash management bank has to spend time pursuing the other banks.

This structure can also be used in combination with middleware and SWIFT access. To ensure an efficient flow of data, the treasurer should conduct an exhaustive round of testing, before going live with a structure to ensure data is captured as expected.

Using middleware, treasury workstations and ERP systems

Middleware has been developed to translate data provided in different formats from different sources, so it can be collated and interrogated by a corporate treasurer. Although there is a clear recognition both among banks and treasury practitioners that standardization of messaging formats is worthwhile, in reality any organization operating internationally or with a number of cash management banks will be interacting with banks using a range of different messaging formats. Even where banks use SWIFT, they may employ different rules about the use of non-standard fields in particular messages.

Middleware sits between the bank and the corporate treasury workstation or treasury management system. It translates the data feeds between the banks and the corporation into standardized messages, in such a way that the corporate treasurer receives complete and corrected information.

In most cases, the middleware provider stores data on its own servers before translating it into the format appropriate for the intended recipient. Information may need to be translated both ways. For example, a corporate treasury may want to prepare all its files in the same format, irrespective of the location and the required format in that location. This allows the treasury department to have a single set of operating procedures, reducing the risk of error and delay caused by preparing instructions in the wrong format. Similarly, banks will provide data in their preferred format, so that charges levied by them can be as low as possible, as processing costs are usually lower if payments are processed through cheaper local payment systems, for example. The middleware provider can prepare a range of files in the preferred format for both standard messages (such as transaction and balance reports) as well as messages with supplementary information (such as invoice numbers for automated reconciliation purposes).

Most treasury management systems (and some ERP systems) use a bolt-on service from a middleware provider to achieve this two-way message standardization. In practical terms, middleware reduces much of the complexity associated with the need to prepare payment instructions and receive balance and transaction reports from multiple banks in multiple locations. However, because it is reactive to the data fed from banks, it cannot completely eliminate problems caused by banks preparing data on different bases or providing incomplete data.

Although treasury management system vendors usually say they can interface with all banks, some bank systems (typically older systems, or those focused on smaller companies) will not interface with treasury management systems. In these circumstances, either an additional interface may need to be built (by either the system vendor or the company itself), or a manual stage may need to be introduced into the data collection process.

Some ERP systems can also act as bank aggregators, with functionality including statement retrieval and data standardization. Using ERP systems can be valuable in organizations with high volumes of cash flows, as bank data can be integrated with information from accounts payable and accounts receivable to provide greater internal control of cash.

SWIFT connectivity

One increasingly common way to achieve improved visibility is to develop a link to SWIFT. SWIFT is a network used by over 10,000 banks, financial institutions and corporations around the world to exchange standardized financial messages. This can be in the form of a direct link to SWIFT, or via an indirect link provided by a SWIFT service bureau or a member concentrator. Both solutions provide the treasury practitioner with the single communication channel described above. The main difference is that a direct link to SWIFT requires the company to maintain the communication links with SWIFT, whereas this will be the responsibility of the service bureau or member concentrator if an indirect connection is used. Most treasury management systems have the capability of generating SWIFT messages and have the functionality to link the

corporate treasury to the company's chosen banks via SWIFT.

SWIFT connectivity considerations

At first sight, access to SWIFT would seem an important tool for corporate treasurers seeking to improve payment flow efficiency and to reduce costs. However, it is important to understand the potential benefits from accessing SWIFT, before deciding whether to connect to it and how best to do so.

The potential benefits from access to the SWIFT network are based on achieving better connectivity with cash management banks, which will result in improved security in those connections. This access will also allow companies (depending on the connection method chosen) to manage communications with a number of different banks based in many different countries, using far fewer platforms in a way that achieves straight-through processing. Connecting through SWIFT also gives companies the opportunity to standardize their processes across these locations, to improve the audit trail and to replace dated communication tools. The potential benefits are explored below.

- **Counterparty risk management.** Since the financial crisis of 2008, corporate treasury practitioners have become much more focused on managing counterparty risk. For international corporations, one of the most important counterparty risks to manage is that posed by their cash management banks. Although there are many advantages in maintaining bank accounts with the same banking group or group of banks, treasurers are aware that a change in bank focus, or even a failure of a bank, could result in services being withdrawn at short notice or, in extreme circumstances, companies losing control of their cash. One way to reduce this risk is to maintain bank accounts with a number of banks. However, this can result in a loss of efficiency leading to a loss of working capital finance, as cash may not flow easily between bank accounts held by different banks. SWIFT access gives the corporate treasurer the opportunity to manage relationships with different banks in such a way that less cash is left idle in group bank accounts.

■ **Overreliance on concentrated banking providers.**

Besides managing the general counterparty risk, treasurers are also generally concerned with retaining flexibility within operations. Typically, access to domestic payment systems is constrained by operational rules set by particular banks. These most often take the form of early cut-off times to meet bank-imposed rules to achieve same-day or next-day settlement. In many domestically focused organizations, these restrictions will have a limited impact, especially if they have an effective forecasting system in place. However, for an international treasury operation, unnecessary restrictions on access to domestic payment clearing systems can make efficient use of cash much more difficult.

At the same time, treasurers are also reluctant to pay unnecessary bank fees or charges for the performance of roles which are increasingly automated, or which can be effected just as simply from the group treasury.

- **Better information and functionality.** Just as transaction services may be limited by bank functionality, so too can access to information and other services. Where banks feed data to their customers, the data feed itself is driven by information received from SWIFT or other data providers. This data is then processed by the bank engine before being presented to the customer. Although many banks are now capable of providing information in real or near real time, there are many which remain unwilling or unable to provide anything more timely than end-of-day or overnight balance and transaction reports. Again, this in itself may not be a particular problem for organizations with limited or highly predictable cash flows. However, as cash flow complexity increases, it becomes more important for cash managers to have access to timely information. A connection to SWIFT enables more direct straight through processing of information, giving the corporate treasurer more control.

- **Authentication and digital security.** As more activity is performed electronically, authenticating a participant and securing instructions digitally are important tools to protect against fraud and

error. SWIFT offers this authentication via its own tools both on a company to bank level and at an individual service user level.

- **Prospect of eBAM.** Electronic bank account management systems allow corporate treasury departments to manage bank accounts held by separate group entities from a single location. In particular, these systems allow corporate treasurers to open and close bank accounts electronically, subject to local regulation which may require a physical presence. They also allow corporate treasurers to update authorizations automatically, perhaps by a link to an HR module, and to manage the conditions of the bank account mandate. There has not yet been a significant uptake of this via SWIFT, but this is likely to change in the coming years, as it allows a central treasury to demonstrate compliance with corporate governance regulation.

However, SWIFT access may not offer sufficient benefit to justify the costs. A company with limited international activity may get sufficient visibility of cash via its own bank. If an improvement is necessary, it may be more appropriate to select a different bank with better functionality than to adopt SWIFT. In addition, there are still a significant number of banks, especially outside Europe, which have not adopted SWIFT. Before committing to a SWIFT connection, treasurers should ensure that it is an appropriate solution.

Making the connection

For SWIFT access, the treasury practitioner needs to identify the most appropriate connection method. There are a number of different connection methods, each offering different benefits for the organization.

Direct connection

There are two main ways of developing a direct connection to SWIFT: to join the Standardized Corporate Environment, or to join Alliance Lite. With a direct connection, an organization is responsible for managing its own communication links, although there are significant differences in the nature of those links. More importantly, there are differences in the level of SWIFT services an organization can access, depending on the method chosen.

BROOKE TILTON, DIRECTOR, DOMESTIC CASH MANAGEMENT, AND JENIFER (PEDERSEN) HERDIN, DIRECTOR OF INTERNATIONAL TREASURY, VIACOM

Over the past two years, the Viacom treasury team has invested significantly in technology within the department. Central to this project has been the implementation of a single treasury management system.

Moving from using a range of different techniques, from internal spreadsheets to bank portals, has allowed the treasury department to operate more efficiently as a whole.

More specifically, the project has resulted in greater visibility over cash balances via improved balance reporting. This improvement means more accurate information can be accessed much faster than in the past.

In terms of timing, the RFP phase of the project took about a year. Improving visibility of cash was always one of the top requirements of the project. The implementation process started in January 2012, with the first phase going live in September 2012, which included both balance reporting and payment initiation. The treasury team is now working on the second phase, which includes the introduction of more automation and links to certain portals.

As well as implementing a new treasury management system, the company chose to implement a direct connection to SWIFT. The decision was based on a cost benefit analysis which set the costs of the SWIFT connection against those of maintaining host to host connectivity with a number of banks. The Viacom IT department chose the direct connection because it felt there was little incremental cost (over the cost of the infrastructure already developed internally) to connect to the SWIFT server, such that it would pay for itself within two years. The treasury benefited from a more reliable, bank agnostic solution, and no requirement to employ anyone to maintain various connections to banks.

Visibility of cash is now achieved primarily through the use of SWIFT MT940 messages, which are

flowed into the treasury management system. Viacom also has a number of liquidity cash pools, the balances of which are managed through the use of MT942 messages.

From the international perspective, one of the keys to the success of the project was Jenifer Herdin's work to rationalize the number of the bank accounts the group holds: 'Rationalizing the number of bank accounts helped understand the process and eased the migration to the new treasury management. We now have four main cash management banks, all of which link to SWIFT. This means the treasury management system receives balance reports from 90% of the banks used by the company offshore, feeding information about bank accounts which hold about 96% of the company's total cash offshore. There are some bank accounts, notably in China and Japan, which are outside this system due to the fact that they are with local banks. These accounts are used for tax payments and payroll and are funded as needed, so therefore the exposure is minimal.'

The team's approach to the project was another reason for its success. Brooke Tilton explains: 'When setting our new procedures, we had to consider everything we had been doing and whether it was meaningful and added value.' Only the most effective procedures were adopted in the new structure.

The implementation ran alongside the day-to-day management of the treasury department. 'Another reason for the project's success was the expertise of the implementation team. You have to be comfortable with your implementation team, both the in-house members and the consultants you use. Because we had to spend time on our day jobs, we relied very heavily on them,' explains Tilton.

'Time management during implementation is vital,' says Herdin. 'I found I needed to set aside time every day to focus on the project to make sure the necessary decisions were made to ensure the work got done.'

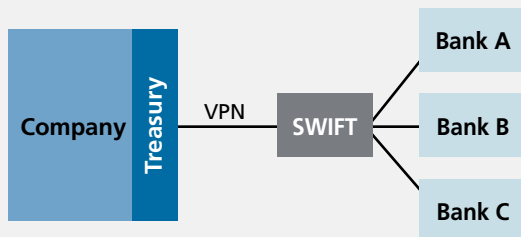
Standardized Corporate Environment (SCORE)

To be able to join SCORE, an organization must be resident in a Financial Action Task Force (FATF) country. It must also be recommended for membership by a member bank. The SCORE is managed by SWIFT, so once an organization has been approved for membership, it is able to contact any of its partner banks via SCORE (as provided they are SWIFT members).

The organization is responsible for managing its own connection to SCORE. This means that the treasury will need to invest in infrastructure to ensure it complies with all upgrades. There will also need to be investment in treasury training to ensure sufficient staff are trained in the preparation and processing of SWIFT messages.

A significant proportion of corporations still access SWIFT directly via Member Administered Closed User Groups (MACUGs). When first established, these offered corporates a different way to access SWIFT directly. To join SWIFT, a corporation had to be invited by a member bank to participate in a closed user group. Once a member of a closed user group, it could only interact within its own MACUG. Realistically, this meant larger corporations wanted to join more than one MACUG, which had economies of scale (as they would have had the infrastructure in place), but was unnecessarily bureaucratic once the more open SCORE option was made available by SWIFT.

CONNECTION VIA SCORE



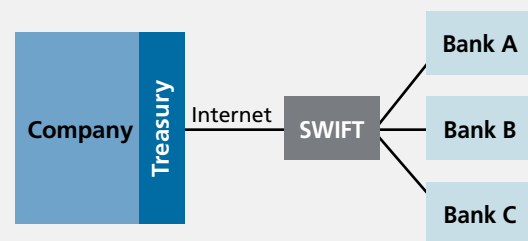
Alliance Lite

Alliance Lite offers organizations direct access to SWIFT via a dedicated web-based interface. SWIFT provides the organization with a security

access key, which enables the company to access the system. Because it uses a web interface, there are few infrastructure costs, and implementation takes only a few weeks.

However, Alliance Lite is limited to organizations with relatively low volumes of activity, up to a maximum of about 200 per day. This means it is not appropriate for larger corporations with high daily volumes of payments.

CONNECTION VIA ALLIANCE LITE



Indirect connection

In both of the cases above, the organization is responsible for maintaining the connection to SWIFT. In the case of SCORE membership, this will require significant initial and ongoing investment in staff and infrastructure. In the case of Alliance Lite, most of the investment will be in staff training.

Many organizations choose to outsource the process of connection to a third party – either a service bureau or a member/concentrator bank. Both have the advantage that there is no requirement by the organization to invest in infrastructure to connect to SWIFT, and the training requirements will be lower.

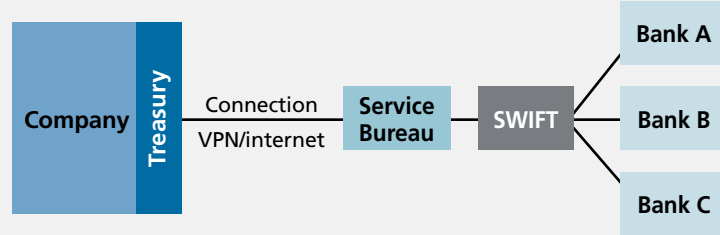
Use a service bureau

Service bureaus are offered both by software companies and some international banks. In most cases, the organization will not have access to the same level of service as is available via a direct connection to SWIFT. However, there are significant differences in the level of service offered by service bureaux.

As with any service level agreement, the organization will want to ensure that the division of responsibilities is both clearly understood and properly documented. Each service level agreement should establish who

is responsible in the event of fraud or a disruption to any connection. With higher service levels (some service bureaux convert submitted payment files into a SWIFT format), responsibility in the event of error should also be clearly stated. Because the service bureau takes responsibility for onward submission of payment and other instructions, the contract should agree on matters such as the commitment to meet cut-off times.

USING A SERVICE BUREAU



COREY WALSH, VICE-PRESIDENT AND TREASURER, BMC

BMC Software, Inc. is a multinational IT management software company with worldwide operations. The high operating margins common to the software industry present the company with significant cash and investments relative to its total assets, making visibility of cash especially critical.

In October 2008, its Houston-based centralized treasury went live with a full treasury management system, incorporating wide functionality ranging from daily liquidity and foreign exchange hedging management to integration with the company's ERP system.

As part of the implementation, BMC converted to SWIFT for corporates, so that today it sends roughly 95% of its payment volumes across the SWIFT network to its many partner banks. In an ideal world, BMC would send all its payments via SWIFT, but as the company expands into countries with less sophisticated banking infrastructures, and acquires companies which use smaller banks without the necessary connectivity, achieving 100% is elusive.

In 2008, Corey Walsh chose to access SWIFT via a service bureau because he felt that the costs and compliance required to access SWIFT directly within a short amount of time would be too great. The company also needed expertise in preparing SWIFT messages. 'Initially, we relied on the service bureau to convert a raw file to a bank and

SWIFT-acceptable file for all of our payments,' explains Walsh. 'Over the years, we have gained experience internally and the banking industry has moved towards standardizing on an XML-based approach. Today, we convert between 90 and 95% of all payments to bank-ready formats within our infrastructure and our service bureau is simply our means to connect to the SWIFT network.' It took BMC about a year to develop the ability to prepare the XML messages, which included a period of testing with a number of global banks.

This automation of the payment process has created two main benefits for the company. First, it has allowed for a centralized payment processes in a financial shared services center with a single accounts payable process. This has saved the company millions of dollars in improved efficiencies.

Additionally, BMC has achieved clear, timely visibility into cash holdings. The company has hundreds of bank accounts with several financial institutions around the world. These accounts report prior day or current day electronic bank account statements over the SWIFT network directly into BMC's treasury management system. This gives Walsh the ability to develop a centralized view of cash and investments on a daily basis. Among the many benefits to this daily visibility, this information is used to manage financial institution risk: an important tool in the current environment.

‘We can view positions by entity, by currency, by bank and by country on a daily basis,’ says Walsh. ‘We can then use this information to plot the cash balances we have with each financial institution against an internally developed model which calculates a risk score per financial institution. This risk score is weighted by the amount of cash we hold with that institution. If the weighted risk score

breaches a pre-set limit, we can make the decision to move the cash very quickly.

‘We now have full visibility over our cash. The result is that we can actively respond to perceived risk to our liquidity around the world. Any decision to move cash is made on actual information, rather than estimated positions on out-of-date data.’

Use a member/concentrator

A member/concentrator typically offers a slightly enhanced indirect proposition, compared to a service bureau. Just as with a service bureau, the fundamental relationship is that the organization submits instructions to the member/concentrator which has a connection with SWIFT. The member/concentrator may also offer broader levels of support to corporate users.

All of the above examples give corporates access to SWIFT in one way or another. Each requires a different level of commitment to invest in infrastructure and training. A SWIFT connection, in whatever form, does provide the opportunity for corporations to standardize their processes with all those counterparty banks they can communicate with via SWIFT.

However, there remain a significant number of banks around the world which are not addressable via SWIFT. Where a corporation has business with such banks, it effectively has two choices. It can choose to operate only with SWIFT banks, and drop relationships with other banks. However, this may not be possible, especially if the corporation does business in locations where the available banks do not participate in SWIFT. In these circumstances, corporations may have to use alternative techniques to gain greater visibility over cash.

No single best solution

Given these different techniques, the lesson for any international corporate treasurer is that there is often no single ‘best’ solution to achieve global visibility of cash. In reality, the treasury practitioner is likely to have to make a series of decisions about the organization’s objectives and, potentially, to prioritize those objectives, given wider requirements. A likely compromise is to recognize that complete visibility may not be possible, given the requirement to maintain multiple bank relationships for both practical and counterparty risk management reasons.

The most appropriate solution will also be partly determined by the method of provision and the connections required. Solutions vary from those which require local installation and management of a dedicated connection to those provided on a software as a service (SaaS) basis, where the organization connects to the service via a web-based interface. Each solution will require differing levels of initial and ongoing investment in IT and other support. Locally installed solutions will require greater investment than hosted ones. Host-to-host connections via a virtual network will be more expensive than web-based interfaces. The treasurer will need to ensure that any investment will provide an appropriate return in terms of the improvement in visibility of cash.

A guide to implementation

The illustrations given above show that there are many different ways for a global organization to achieve cash visibility. Whether the project to achieve this is standalone or part of a wider treasury transformation project (whether a cash mobilization project or the implementation of a new treasury management platform), the key elements of visibility should form part of the project-planning process. As with any project, there are three main stages: evaluation, selection and implementation. We address each one in turn.

Evaluation

The first stage is to identify the organization's key operational requirements and to build the business case for the change. In most cases, it will be appropriate to start by assessing the level of visibility the central treasury already has over global cash. This will allow the treasurer to assess where the variances in service quality exist. This self-knowledge will help the treasurer to identify the obstacles to better visibility.

There are a number of key factors when identifying the operational requirements. These include:

- **Number of bank accounts.** The number of bank accounts and currencies in which these accounts are denominated play an important role in determining the complexity of achieving visibility. It may be possible to consolidate the number of bank accounts first, to discover whether this will enhance the visibility of cash balances and flows.
- **Currency denominations of bank accounts.** Determining how best to manage currency risk is an important issue for international treasury practitioners. There are two broad approaches, from a visibility perspective. The first is to develop a series of cash positions for each operating currency. The second is to build a single consolidated balance based on nominal (or possibly actual) translation of balances into the group's reporting currency.
- **Number of locations.** The number of countries in which an organization operates will greatly increase the complexity of the task of ensuring cash visibility. This is simply because each country continues to have its own domestic banking practices and standards, even in the eurozone (despite the introduction of the Single Euro Payments Area).
- **Number of different providers.** The more banks and other providers the organization interacts with, the greater the level of complexity when trying to assimilate data provided by these different providers. Just as with bank accounts, it may be possible to reduce the number of banks used for cash management purposes. However, this will be constrained by a number of factors, including the requirement for banking services around the world, as well as the organization's own policies on counterparty risk management.
- **Existing structures.** Existing cash management structures, including the location of header accounts, will to some extent determine how cash flows within a business, and will therefore channel information flows at the same time. Complex structures, which may be the result of short-term solutions to manage cash in growing businesses (perhaps through acquisition), will result in a complex view of cash.
- **Potential structures.** New cash mobilization structures can be introduced to ensure a more efficient flow of information back to the central group treasury.
- **Scope of existing treasury management system.** Many organizations adopt treasury management systems or other platforms to support their cash and risk management activities, yet they use only a proportion of the functionality. Using these systems to achieve better visibility may be as simple as using some existing, but otherwise unused, functionality or adding a standard module or middleware. In the case of software provided as a service, this can involve very little work in the treasury department, as access to better information is controlled by the vendor. However, where an organization has developed (or enhanced) a solution internally, achieving better results can be both costly and time-consuming. In addition, where an organization has a legacy cash management system, it may not be possible

to achieve the enhanced service, so a new solution may be required.

- **Personnel.** For an organization to manage cash visibility internally, whether via an internally built solution or via direct connection to SWIFT, it will need to make a significant investment in personnel to ensure the appropriate techniques are followed. Compliance with SWIFT requirements can be time-consuming and expensive, so an organization will want to be certain that the requirement for investment in individual skills (and it will need to be more than one individual being trained), and those individuals' deployment, is justified by the gains in visibility, control and operational efficiency that are achieved.
- **Project funding.** Separately, the treasurer will want to ensure there is sufficient funding in place to support any investment in new products, policies or procedures. This may require action initially to obtain management support for the project. A guarantee of improved visibility and control over operating entities is often a powerful argument at board level.

Once the required and desired improvements have been identified, the treasurer can determine how important it is that the service is standardized across all bank accounts, entities and countries. It may, for example, be determined that it is preferable to pursue a solution which incorporates most entities, but which also requires information from some bank accounts to be collated separately. While not ideal, this may have the effect of providing higher-quality information about more cash positions. In addition, reducing the number of entities outside the structure allows the treasury team to focus any requirement for manual intervention on those entities.

If this is part of a wider project, the requirements for visibility should be incorporated into the requirements definition for that project. If visibility requirements are poorly defined or are not given a very high priority within the project as a whole, then it is likely that they will not be considered in sufficient detail when the various solutions are both presented and then selected. This is a very important step, as there are likely to be many compromises

when trying to identify a solution that meets most of the objectives for this wider project.

The challenge for the treasury team is to articulate the importance of enhanced visibility of cash as an important component in delivering the overall objectives of the wider project. For example, if the primary objectives are to increase the opportunity to self-fund the business via a better use of working capital and to better manage cash flow at risk, then an important element of both of these is for the solution to deliver better global visibility of cash.

When developing the requirements definition, having an understanding of how the core objectives will be met is a critical tool. For example, the requirements definition agreed by all parties may include a certain level of functionality across bank account management.

It is always important to remember that it may be possible to achieve some or even all the improvement in visibility by simply adapting existing technology and functionality. This may include incorporating upgrades provided by the existing provider, or adding new modules or middleware to an existing platform to achieve improved results.

Selection

The selection process should start by establishing whether there are sufficient resources, in terms of budget and management support, to support the project. This may require management input to support requests for group entities to operate differently, perhaps by signing up to a new bank provider or by using a new treasury management platform.

Form a selection team

To manage the selection process, it may be necessary to form a small selection team. This will certainly be true if the organization is planning a major project. Even if the project is focused solely on enhancing visibility, it is likely to be appropriate to have a small group viewing the project from a number of different perspectives. For example, the cash manager is likely to want to focus on the visibility element; there may be a role for IT support, especially if some functionality is

being developed in-house; and some form of reporting or auditing input will usually be helpful.

Involve bank(s) and technology provider

If the project does not require a change in bank or technology vendor, it will be appropriate to involve representatives of both in the process. Even if some change is anticipated, it will be important to maintain service levels during any transition, so both banks and technology vendors should at least be aware of the project, and be given the opportunity to make their case early on. (This may not apply if a bank has stated that it plans to cease offering a service, or the vendor has stated that it plans to stop supporting your particular product.)

Insource or outsource?

During this process, the first question to answer is whether the organization wants to manage the process of ensuring cash visibility itself, or outsource the process to a third party. The decision on whether to outsource will depend on a number of variables. These include the size and complexity of the organization's operations, and the level of resource available to the treasury department in terms of both personnel and funds.

If the decision is taken to insource, either by developing new data collation tools in-house or by building a direct connection to SWIFT, the team will need to develop a more detailed project plan. This will involve IT experts, who will either have to build the new in-house functionality or install and manage any link to SWIFT. Once this has been done, the team should revisit the decision on whether or not to outsource in the context of the more detailed project plan.

Obtain more information about service

If the decision is made to outsource, whether to a treasury management vendor or to a service bureau, the next step should be to gather more detailed information about how the service or system operates. This can be done as a series of demonstrations or via information exchange. However, the key factor is to understand the level of service the provider is likely to give, so as to be able to determine whether it offers sufficient visibility over cash flows.

If the decision is taken to build a direct connection to SWIFT, the team will need to talk with its banks about their functionality and also to explore fully what will be required to complete the connection.

Issue RFP

With a focused group of potential providers to select from, the treasurer should then issue a detailed request for proposal (RFP). This could act as validation for a single name shortlist.

Using the information developed above, the RFP should indicate what information the treasury needs to make its final decision. The RFP should be clearly structured, with most questions requiring an open response. Any RFP which asks closed questions invites a series of Yes replies, even if the provider only offers a very basic service. Go into detail for the important points. Require providers to draw distinctions between services offered in some locations and in others.

Evaluate RFP

Once responses are in, the team will need to evaluate them. How this is best accomplished depends on the nature of the service required. In many cases, it will be appropriate for the responses to be assessed on the basis of a minimum level of functionality. What this means in practice will vary quite significantly from organization to organization, depending on the degree of complexity outlined above.

If the requirements are highly specialized and some degree of compromise is required, it can also be helpful to introduce a form of matrix to evaluate the relative merits of different solutions. While the results of this sort of matrix will not necessarily constitute a scientific way of reaching a decision, working through the process of setting the matrix may well help the team prioritize their requirements. It may also indicate significant areas of dispute within the team which can be identified and, ideally, resolved before the selection is made and the implementation begun.

Consider compromises and make selection

Once the team has as much information as possible, it will need to make a decision on the solution to adopt. Again, this may or may not be part of a wider project which will affect the decision-making process.

As with other technology projects, some significant compromise may be necessary.

There are some key questions to ask at this point. These include:

- Is a standard solution available? If so, will it provide a sufficient solution that meets the project objectives?
- What are the main obstacles to meeting the project objectives? Are these obstacles which can be overcome in the structure of the solution? Or are external factors (such as bank functionality) the main problems?
- If major external obstacles exist in certain locations, how are bank accounts in these places to be managed?
- In the case of an insourced solution, will the cost of building and supporting the custom-made material be cost-effective in the longer term?
- In the case of an outsourced solution, does the vendor guarantee success in any higher risk areas?
- How future-proof is the solution? How will any required upgrades be made?
- Where does this project fit within the treasury department's forward plan? Should the project be completed now? Or should the team delay it to so that the transition is timed to coincide with an imminent project? Bear in mind that future projects may be delayed for operational or financial reasons.
- If the decision is made to pursue the project, how long will the implementation process take? What disruption will it bring to the ongoing business?

Implementation

The selection decision will be made partially on the basis of the implementation process. Achieving a successful implementation is the fundamental requirement of any project. Most of the compromises which need to be made will have been agreed during evaluation and selection. However, there is always a strong chance that further compromise may be necessary during implementation.

The implementation process will be in two stages: the installation and testing of the new solution, followed by the roll-out phase.

Installation

The installation phase incorporates the development and acquisition of all necessary hardware and software to achieve the new solution. This will include some or all of the following steps.

The first consideration should be the connection to the banks. This will vary as each solution described above has different requirements. Any new hardware and software will need to be developed (if necessary) and installed.

- **Bank aggregator.** Any bank system requires a connection to that bank. At the simplest, this will be a web-based interface. In some cases, the connection will be a dedicated host-to-host connection. The aggregator bank will be responsible for managing connections with the other banks, although this should be clearly set out in the service level agreement. This structure should be carefully tested, to ensure the appropriate information is transmitted to the company before any existing connections are turned off.
- **Middleware/treasury management system/ERP system.** In this case, any enhanced use of a treasury management or ERP system, including middleware, is best achieved through discussion with the vendor or, in certain circumstances (such as when this is part of a wider project), with a specialist consultant. As with a bank aggregator solution, any change to the treasury management or ERP system should be carefully tested.
- **SWIFT.** If the solution includes a link to SWIFT, the organization will need to join. This is an established process which will need the support of one or more of the organization's banks.

SWIFT offers a range of services to support corporate treasurers. The treasurer will need to ensure the required services are supported by its banks before selection. If an indirect connection method is chosen, the service bureau or member/concentrator will manage the connection to SWIFT.

If a SWIFT solution is selected, the installation must follow the relevant SWIFT guidelines and will also include any security devices.

STEPHEN DARNLEY, CORPORATE TREASURER, IATA

IATA is a not-for-profit trade association which provides advocacy services, technical and safety consultancy, and a range of financial services to the airline industry. From a cash perspective, it is the provision of settlement services for airline passenger ticketing and cargo shipments which has the greatest impact. The settlement service takes agents' sales information from global data systems, calculates what is due to each airline, and then initiates payments to those airlines on the settlement date. In excess of USD 260 billion was settled through this process in 2012.

In the past, this was a highly complex and manually intensive process. IATA has over 230 operations in more than 160 countries around the world. It had relationships with over 90 banks, many of which had different operating procedures and technical abilities, making cash visibility, and therefore internal reconciliation, very difficult to achieve.

IATA has developed its own internal platform (IATA Reconciliation and settlement Integrated System – IRIS) to manage the settlement process. To work efficiently, the system needs to be able to accept bank statements from banks, and to be able to identify and initiate payments due to each airline.

SWIFT for Corporates was chosen to provide the communication channel with the organization's banks. 'Getting some of our banks signed up to SWIFT for Corporates and putting SCORE agreements in place took longer than expected,' says Stephen Darnley. 'We then needed a period of testing to ensure everything worked as anticipated.'

Statement data from the banks is routed directly into IRIS from each country, via specific BIC

codes for each of IATA's five shared services centers around the world. The system then performs the necessary reconciliation and generates the settlement instructions for each country. Initially, the settlement instruction was via an MT 101 urgent payment message: 'We needed to make urgent payments, so we had little choice over the message type. However, I would advise others to think carefully about the costs of different payment mechanisms. These choices can drive up settlement costs,' explains Darnley. IATA will be taking advantage of an upgrade to implement ISO 20022, which will give the organization access to low-value payment systems, and facilitate the use of Asian and Cyrillic character sets in data transmissions.

The new structure is much more efficient. IATA has rationalized its banks from over 90 to fewer than 70 worldwide. More significantly, IRIS will replace the various legacy electronic banking systems. 'Banks do flex some of the information used in the messages, but fundamentally the processes to be used by all our banks around the world are the same,' explains Darnley.

'One of our requirements was to achieve a more robust solution,' says Darnley. 'Internally, IRIS is a single global system with our five shared service centers backing each other up, ensuring business continuity. Our SWIFT connection is managed by a service bureau. Data gathering is much quicker, with information automatically delivered. The standard system is more secure and easier to control. We have achieved all the goals we set ourselves. We have a good team which has maintained the flexibility to keep the overall project on schedule, even when individual challenges have taken longer to resolve.'

Once the solution is in place, treasury will need to implement new or amended operating procedures. This will include processes to initiate and authorize activity (including training in the preparation of payment and other messages), to set the adoption of individual limits and authorities, to deal with exceptions and any other procedures.

The team will also need to agree procedures with banks or third-party providers, such as cut-off

times and the method for dealing with exceptions and errors. These agreements should be legally documented in a service-level agreement. The service level agreement should also state clearly which party is responsible for the maintenance of any connections with banks and other third parties.

Finally, the new solution should be fully tested with the new operating procedures before it is rolled out to the wider organization.

DON DAVIS, TREASURY PROJECT MANAGER, INTEL

Intel operates a single, decentralized treasury department, with treasury personnel based in a number of locations around the world. The department is structured into teams, with people based in different time zones, all of whom can make cash management decisions.

In terms of cash, the company has about USD 20 billion which is invested by the treasury department. The policy is to invest short term, which means treasury is continually investing, with a requirement for full visibility to be able to manage the funds effectively. Although the company generates about USD 150 million of receivables daily, these volumes are dwarfed by the inflow of proceeds from the sale of and the maturing of held securities.

Five years ago, the treasury department implemented a new treasury management system. As part of that project, the team considered how best to connect to its banks. Although the company has one main cash management bank, it has two custodian banks and it also makes periodic acquisitions, all of which bring new bank accounts and, often, new banking partners as well.

Given the importance of the cash flows from securities transactions, the treasury team prioritized connectivity with its two custodian banks (Citibank for US securities, and Euroclear for non-US securities). The team calculated it would cost about the same to connect to SWIFT as it would to build host-to-host connections

to both Citibank and Euroclear. A SWIFT connection also allowed treasury to communicate with the other banks treasury used (this included separate banks for accounts receivable and payroll), as well as many of the new banking partners which came with the acquisitions.

The company receives bank statements from Citibank for more than 500 bank accounts, spread across five time zones globally. These are received as a consolidated file via SWIFT's FileACT channel. These statements are then booked into the treasury management system for cash positioning and for treasury bank account reconciliation purposes. The feeds from Citibank also include statements from other banks, which are consolidated via Citibank's consolidation tool. Euroclear sends its end of day statements via the FIN channel.

Don Davis describes a number of challenges in making this structure work.

'We have had to work to recognize duplicate statements. There are two main problems. First, statements can be issued with inaccurate references, such as non-sequential statement numbers. Second, even though we may receive statements from some banks via the Citibank consolidation tool, those banks may occasionally send statements directly to us as well.'

Davis has found some problems with the standardization of messages. 'The SWIFT MT 940 works well for most countries, but there can be

problems. First, there is some freeform text which banks use slightly differently so it is important to know each bank's approach. Second, when Japanese characters are translated into English, some appear as special characters. One means 'end of statement', stopping the processing of that message. To overcome this, we switched to BAI2 format (which can be sent via SWIFT) when communicating with Japanese banks. We have identified ISO 20022

as a possible solution to a similar situation with Chinese statements and payment initiation.'

There are a number of different ways banks can prepare statements: for example, balance including float or available balance including float. 'Make sure you ask for the balances you want,' says Davis. 'Our cash management system takes account of future maturities of securities, so we want our statements not to include float.'

Roll-out

Once the new solution is established, the roll-out process can begin.

- **Training.** The team should start by ensuring sufficient staff are fully trained in the new process to manage the ongoing roll-out.
- **Start roll-out.** Once training is complete in a particular organization or country, the solution can be rolled out. It is important to have a clear plan for this stage, to ensure that training is provided in advance. The plan should be continuously evaluated and modified, if necessary.
- **Parallel running.** There will be a period of parallel running to ensure information is being transmitted and received appropriately.
- **Shut down legacy solution.** Once the team is comfortable with the new solution, the legacy solution can be closed down.
- **Review new solution for efficiency.** Finally, the new solution should be reviewed, to assess whether the required efficiencies are being achieved and to identify how best to make improvements. Consider verifying bank fees as part of the process, and discuss with bank officers to make sure the system is the most efficient, from a pricing and service standpoint. This could be part of the ongoing review process with your bank.



Country profiles

In this section, there is a brief description of the commonly available tools to improve global cash visibility in a number of key markets around the world. There is further information on payment instruments and systems in the AFP Country Profiles which can be accessed at www.afponline.org/countryprofiles/.

Argentina

Multinational companies, local firms and consumers all use electronic banking services from Argentina's leading banks. Standard functionality for wholesale customers includes domestic and cross-border payment initiation, balance and transaction reporting, collections/remittance data, and zero-balance accounts.

Multibanking is available via a platform called DataNet, owned by the Interbanking clearing house, which enables firms to access account information at any of 47 participating banks. DataNet also supports same-day funds transfers, and is commonly used for tax and vendor payments.

Financial portals operated by Interbanking, Banelco, and Red Link enable consumers to deal with bills, credit cards, and taxes online.

The BCRA and the electronic clearing houses have adopted a standardized code (CBU – Clave Bancaria Uniforme) for all interbank electronic funds transfers.

Australia

Most companies in Australia use the electronic banking services offered by Australia's leading domestic and international banks. The Australian Bankers' Association has developed bank-independent electronic banking standards for ATMs, EFTPOS terminals, telephone banking and internet banking. The services on offer usually include balance and transaction reporting as well as payment initiation.

Browser-based banking services are offered by all the leading banks and are increasingly popular with individuals and small companies.

Clients can currently pay bills online or over the telephone via their banks using the automated BPAY system, which processes credit transfers through a central automated clearing house.

Belgium

Almost all Belgian companies have access to electronic banking services. There is a national bank-neutral electronic banking system that was developed in Belgium, the Interbank Standards Association Belgium (ISABEL). A full range of electronic banking services is available through ISABEL, from daily transaction and balance reporting, to domestic and international payment initiation.

Most banks offer internet banking to companies. Electronic bill presentment and payment services are increasingly popular. ISABEL provides users with individual mailboxes, enabling e-invoicing.

Brazil

Electronic banking services are widely used in both the business and retail sectors in Brazil. Domestic and foreign-owned companies in Brazil typically use electronic payment initiation, reporting and funds transfer services. Many companies operating in Brazil exchange data electronically with banking and commercial counterparties via VANs (value-added networks) and EDI protocols.

Canada

Canadian companies use a wide range of electronic banking services, from daily transaction and balance reporting, to some domestic and international payment initiations. Although there is no bank-neutral electronic banking system, all the major Canadian and international banks provide their own proprietary electronic banking platforms, most of which facilitate multibanking through the use of common standards.

Companies are also able to collect check payments over the internet, using check-imaging programs. Enhanced e-commerce services are also available via the use of EDI, which is at similar levels to that in the USA.

Chile

Electronic banking services are commonly used by domestic and multinational firms operating in Chile. Typical functionality available to companies includes domestic and international payment initiation, balance and transaction reporting, and zero-balancing.

China

A range of electronic banking services is available, from account enquiries to payment initiation. However, the use of Chinese characters can be problematic for automated payments. Some banks offer SAP to help with this issue, but it is still dependent on whether the system can handle Chinese characters.

Despite having the world's highest number of internet users, internet banking in China remains restricted to large cities. Public reservations over security have limited the number of internet banking accounts in China, despite the fact that most banks have adopted the certificate system of the China Financial Certification Authority (CFCA) to encrypt their internet banking systems.

The PRC's Online Payment Interbank Clearing System integrates the online banking services of various banks to provide a nationwide clearing system for internet initiated payments. The 'Super-e-banking' system became fully operational nationwide during 2012. Most of China's major domestic banks and some foreign banks now participate in the system. Customers of these institutions make real-time, online transactions and account enquiries.

Czech Republic

The majority of Czech companies have access to electronic banking services, use of which is routine. There is no bank-independent standard for electronic banking, but the local version of MultiCash, and domestically developed Gemini (by BSH Praha), are the most common electronic banking packages. A full range of electronic banking services is available, from daily transaction and balance reporting, to domestic and international payment information and initiation.

France

Almost all French companies have access to electronic banking services.

The French banking community now uses the SEPA-compliant Electronic Banking Internet Communication Standard (EBICS), a secure transfer protocol for the online exchange of XML files, or SWIFT for Corporates for large multinational companies. This replaced the domestic ETEBAC (Echanges télématiques entre les Banques et leurs Clients) X25-connection telecommunication protocols, developed by the French Banking Organization and Standardization Committee (CFONB).

The CFONB has adopted the Referentiel General de Sécurité (RGS), an electronic certificate for the banking industry. The RGS is a set of rules for securely exchanging information electronically within the banking sector, thus facilitating the acceptance of electronic certificates and signatures.

Germany

Almost all German companies have access to electronic banking services. There is a bank-neutral electronic banking system developed in Germany, MultiCash. As the most commonly used system for electronic data interchange in Germany, MultiCash acts as a de facto national electronic banking platform. Most commercial banks also offer the MultiWeb online banking solution. In addition, some banks provide their own proprietary electronic banking systems. A full range of electronic banking services are available, from daily transaction and balance reporting to domestic and international payment initiation.

MultiCash and MultiWeb can be used alongside one another, as both support the SEPA-compliant Electronic Banking Internet Communication Standard (EBICS), a secure transfer protocol for the online exchange of XML files. SWIFT for Corporates is also available to large multinational companies.

Hong Kong

There is no electronic banking standard and, as such, access to electronic banking services is either provided by a company's bank or through browser-based software.

A full range of electronic banking services is available, from daily transaction and balance reporting, to domestic and international sweeping arrangements and some transaction initiation.

India

Large Indian companies commonly use electronic banking to upload payment files to their banks. Some banks also offer same/next-day balance and transaction reporting and electronic invoice presentment and payment (EIPP), as well as services that enable clients to view the clearing status of checks over the internet.

Although India does not currently have one bank-independent standard for all electronic banking, transactions processed by India's NEFT payment system use a standardized financial message format known as the Structured Financial Messaging System (SFMS), which is similar to SWIFT.

India's RTGS system uses a proprietary message system, and in the past year the RBI has begun the process of developing its message format to an XML-based messaging system that conforms to the most recent International Standards Organization (ISO) standards.

Ireland

A wide range of electronic banking services are available from both local and international banks. Large companies operating in Ireland commonly use electronic banking services for reporting, payment initiation and liquidity management to achieve a high level of automation in their treasury operations. The presence of a large number of leading cash management banks in Dublin's IFSC provides companies in Ireland with access to the most sophisticated technology-based banking services. However, no technology standard for electronic banking has been adopted by banks operating in Ireland, and as such, the proprietary services on offer may have limited interoperability.

SWIFT for Corporates is available to large multinational companies.

Israel

An increasing number of companies have access to electronic banking services, which are now widely available and offered by the majority of banks in Israel. There is no national bank-independent electronic banking standard in Israel. The services on offer usually include balance and transaction reporting as well as payment initiation.

Italy

Italian companies commonly use electronic banking services. Bank-independent CBI (Customer to Business Interaction) Consortium electronic banking standards have been developed by the Italian Bankers' Association (ABI) and are used by over 1.5 million companies in Italy. A range of electronic banking services are available, from daily transaction and balance reporting, to domestic and international transaction initiation.

The CBI Consortium offers end-to-end security, electronic exchange of invoices, invoice financing, SEPA credit transfers (SCTs) and direct debits (SDDs), and structured statements (for domestic and cross-border operations). CBI Consortium's online platform is mandatory for banks in Italy, with the aim of providing better banking services for corporate clients.

Japan

Most Japanese companies have access to electronic banking services, known in Japan as firm banking. There is no bank-neutral electronic banking system in Japan; instead banks provide their own proprietary electronic banking systems. A full range of electronic banking services is available, from daily transaction and balance reporting to payment initiation and access to overseas bank accounts. In addition, companies with access to ANSER (Answer Network System for Electronic Requests) can view balance records on accounts across several banks (provided the banks meet with ANSER standards). Users can effect fund transfers in domestic and foreign currency

in real time between these accounts, via Zengin. This service is primarily available for accounts with domestic banks, but an increasing number of foreign banks belong to ANSER.

Non-Japanese companies may find electronic banking difficult, as there can be problems transliterating data from Japanese characters into a readable format for internationally developed ERP systems. Some international companies therefore choose to work with separate electronic banking and ERP systems for their Japanese operations.

Luxembourg

Banks offer electronic banking services both via their own proprietary platforms and MultiLine, Luxembourg's version of the German MultiCash system, which offers companies access to the electronic banking services of multiple participant banks via a single common technology platform. MultiLine supports the SEPA-compliant Electronic Banking Internet Communication Standard (EBICS), a secure transfer protocol for the online exchange of XML files. In addition, MultiLine can send invoices for payments by direct debit to be processed by CETREL. SWIFT for Corporates is also available to large multinational companies.

Due to the international nature of the commercial and financial sectors in Luxembourg, electronic banking offers particularly strong cross-border as well as domestic functionality, taking in payment initiation, reporting (intraday and end-of-day), and liquidity management (i.e. automated sweeping) services.

Mexico

Large Mexican banks offer a range of electronic banking services. Large Mexican companies and multinational corporations use these services, particularly for reporting and payment initiation purposes.

A standard protocol has been adopted (Clave Bancaria Estandarizada – CLABE) for interbank funds transfers by the Mexican Bankers' Association, CECOBAN and Banco de México.

Netherlands

Competition between local and international cash management banks means that companies are very well served with electronic banking solutions that offer near real-time, multi-bank visibility across accounts as well as highly automated payments initiation and collections capabilities. Dutch banks have never adopted a common technology platform for electronic banking. Although electronic banking solutions are currently proprietary, Dutch banks offer SWIFTNet access to corporate clients (SWIFT for Corporates) as a bank-neutral means of company-bank communication.

Poland

Increased competition and investment by foreign banks means that Polish companies have access to a wide range of electronic banking services. End-of-day balance reporting and domestic and cross-border payment initiation are regarded as standard, while intra-day reporting and liquidity management functionality are also being added to the leading banks' electronic banking services.

There is no common communication standard for electronic banking services in Poland. Many Polish companies use the bank-independent MultiCash software package, originally developed in Germany. A number of local packages have also been developed, particularly for mid-market firms.

Puerto Rico

Almost all Puerto Rican companies have access to electronic banking services. There is no bank-independent electronic banking system in Puerto Rico, but most banks use the Bank Administration Institute (BAI) format to transmit balance and transaction data (see USA below).

A full range of electronic banking services is available, from daily transaction and balance reporting to payment initiation.

Russia

Electronic banking services are provided to corporate customers by a number of large Russian and international banks, but overall usage is less common than elsewhere in Europe. As there is no common standard for electronic banking services, multi-bank functionality is very limited and integration with ERP systems can be labor-intensive. The bank-independent MultiCash electronic banking platform is offered by a number of banks. Most banks offer intra-day balance reporting and domestic and cross-border transaction initiation services.

Although internet banking services are offered by most of the country's leading banks, usage has been restricted by the lack of broadband internet access outside Moscow and St Petersburg, and onerous electronic signature legislation.

Singapore

Singapore's sophisticated and competitive banking market offers large companies and smaller businesses a wide range of electronic banking services. For their larger clients, banks offer domestic and cross-border payment initiation and reporting services, as well as automated sweeping capabilities.

There is no common standard for electronic banking in Singapore, so the banks' services are provided via proprietary protocols and formats. Most electronic banking services are offered via browser-based applications as well as across leased lines.

South Korea

Almost all South Korean companies have access to electronic banking services. Electronic banking is also known as firm banking in South Korea. No bank-neutral electronic banking system has been developed in South Korea. Instead, most banks offer their own proprietary packages. A full range of electronic banking services is available, from daily transaction and balance reporting, to large funds transfers.

Firm banking allows users to access their accounts on their bank's system, usually via a fixed line direct to their bank.

Sweden

Almost all Swedish companies have access to electronic banking services. Users have access to a wide range of banking services including payment initiation and transaction and balance reporting, as well as some multi-bank transactions.

There is no electronic banking standard. However, the bankers' associations of Denmark, Finland, Norway and Sweden have developed XML-based MIGs (Message Implementation Guidelines) for customer credit transfers (based on the SWIFT C2B payment initiation message), payment cancellation requests and payment status reports.

Switzerland

Electronic and internet-based banking services are widely available to companies and individuals in Switzerland. International cash management banks provide large corporate clients with intra-day and end-of-day balance reporting and automated cash sweeps across domestic and cross-border accounts, as well as payment initiation and processing capabilities. No national technology standard exists for electronic banking in Switzerland, but use of UN/EDIFACT standards for electronic communication between companies and banks is common.

An electronic bill presentment and payment (EBPP) service, Paynet, can be used for business-to-business and business-to-consumer payments in multiple currencies and across multiple banks.

Taiwan

Almost all Taiwanese companies have access to electronic banking services. There is no bank neutral electronic banking system; banks provide their own proprietary electronic banking systems.

A full range of electronic banking services is available, from daily transaction and balance reporting, to payment initiation. Foreign banks tend to offer a wider variety of services.

Turkey

As a result of technological improvements, an increasing number of companies use electronic banking services (including ATM, telephone and online banking services), which are now offered by all domestic and international commercial banks. There is no national bank independent electronic banking standard in Turkey, and facilities vary widely. There is significant competition between domestic banks over their electronic banking products. The services available from the more internationally oriented banks tend to be more extensive. The services on offer usually include balance and transaction reporting as well as payment initiation.

UAE

There is no national bank-independent electronic banking standard in the UAE. The services on offer usually include balance and transaction reporting as well as payment initiation.

UK

No bank-neutral electronic banking standard has been developed in the UK, so most banks provide their own proprietary electronic banking systems. A full range of electronic banking services is available, from daily transaction and balance reporting, to automated sweeping of balances, multilateral netting, and domestic and international payment initiation. Banks are increasingly offering automated services that can facilitate liquidity management techniques.

USA

Although the USA does not have an electronic banking standard, electronic banking services are widely available and include balance reporting, transaction initiation, payables and receivables tracking, and image capabilities. Most banks transmit transaction and balance data using the Bank Administration Institute (BAI) format. Using BAI, users are able to carry out a number of functions, including accessing intra-day and end-of-day balance and transaction reports, initiating payments and tracking payments and receivables.

The Association for Financial Professionals (AFP) has published a standard format and standard service codes for the account analysis report. Most US cash management banks adhere to this standard. The account analysis is also available from major banks in the ANSI (American National Standards Institute) ASC X12 822 account analysis format.

Venezuela

Venezuela's banking market offers companies and smaller businesses a wide range of electronic banking services, including reporting and payment initiation.

About the Author

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