5 Best Practices for Improving Payments and Cash Management

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As corporates seek new ways to effectively address complex global payment and cash management issues, payment factories offer a comprehensive and flexible solution. This guide examines key areas that a payment factory should address and recommends best practices that can ensure you execute the business process changes required to minimise risk, enhance performance and improve cash management.

Today's Payment Challenges

Managing enterprise payments continues to be complex and demanding. We live in a world where credit is tight and the macroeconomic environment is both risky and fast-changing. As a result, inefficiencies in payment processing and cash management can make the difference between a company's success and failure.

At the same time, many companies are growing through mergers and acquisitions. This has led to financial and operational complexities, including:

Multiple divisions and business sites within an organisation, often with different operating procedures and business processes

Multiple legacy and back-office systems, including banking, enterprise resource planning (ERP), and line of business applications

Multiple bank accounts and banking relationships to manage cash globally, with disparate payment and collection types

Credit constraints, the wide range of requirements for international commerce and the inconsistencies and complications created by corporate mergers and acquisitions have led many organisations to seek innovative approaches. Today more than ever, businesses need integrated solutions that address all the multifaceted business processes relating to global payments and cash management.

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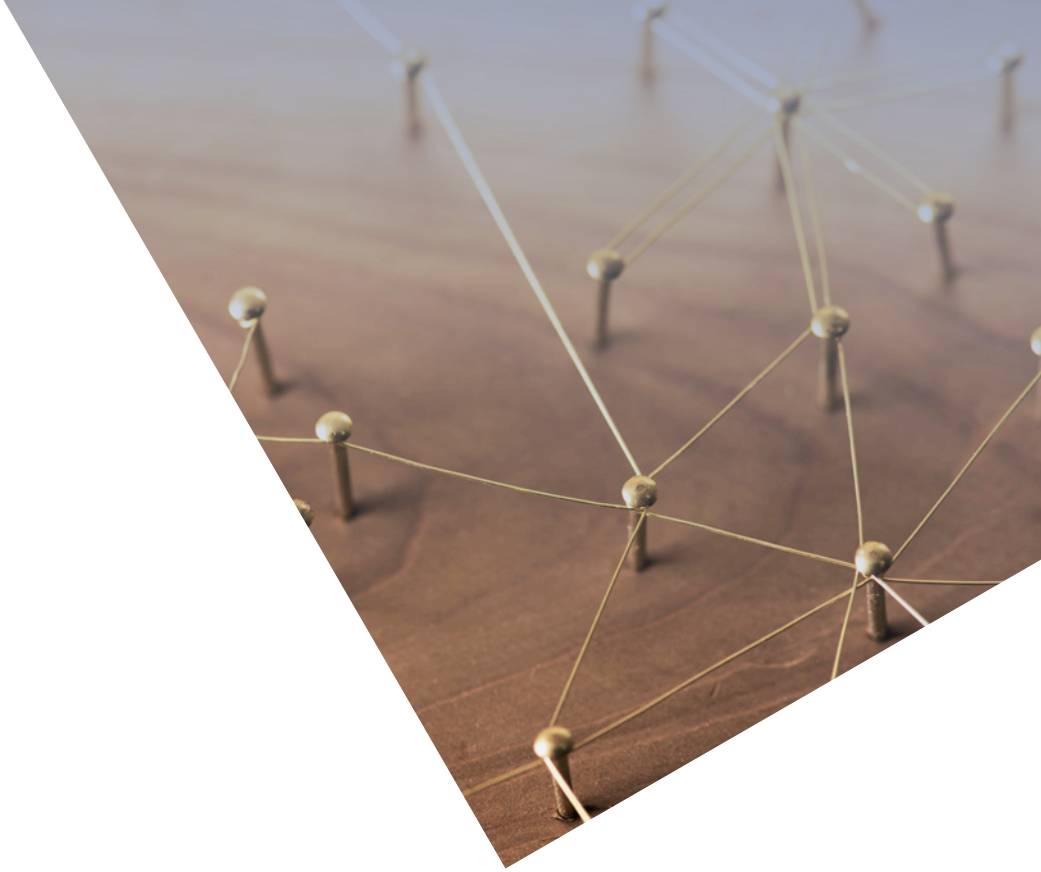
Payment Factories Optimise Operations

Many high-performing organisations are deploying a payment factory to streamline and standardise their payments processing across all enterprise applications, payment types and banks.

There has never been a better time to create a payment factory and capture the benefits of improved control, visibility and streamlined processing. This is due to a series of technology advances, regulatory drivers and market influences. And it's not just payments but collections too which benefit from being standardised and centralised.

The greatest benefits in cost savings, future proofing and speed to "go live" can now be achieved by having the payment factory hosted in a secure cloud. On the technology front, during the last 15 years the use of web-based technologies has become widely accepted. More recently we are seeing accelerating adoption of cloud-based solutions, even for mission-critical activities, to the point that a growing number of corporates are implementing payment factory solutions on an outsourced, secure cloud model. Corporates are making this choice as they increasingly consider that proven service providers are better placed to deliver and support resilient and flexible platforms, in a cost effective way.

Acting as a single payment gateway, a payment factory helps increase efficiency, improve control over funds, mitigate risk, and enhance visibility.

A payment factory helps raise efficiency, improve control over funds, mitigate risk and increase visibility.

A payment factory is more than just a centralised system, it is also a business strategy and a way of deploying resources efficiently. Essentially a payment factory brings together:

- All payment and collection types (e.g. treasury, supplier payments, payroll, direct debits, cheques etc)

- All balance and transaction reporting

- All other corporate to bank exchanges (e.g. deal confirmations)

- All transaction bank relationships

Key characteristics that a payment factory should offer:

- A centre of excellence for payments and collections on behalf of the entire enterprise, or more typically for a geographical region

- Secure, standardised interfaces

- Standardised processes

- Scalability across the enterprise

- Centralised controls, with segregation of duties

- Pan-enterprise visibility for treasury

- Reformatting capabilities

- Segmented visibility by units of their local / regional activity

- Full audit functionality

- Validation of payments

- Standardised bank connectivity

The right choice. There are a number of possible implementation models for corporates looking to adopt a payment factory. These include full centralisation and a virtual or decentralised model. Which solution is right for a particular corporate will depend on several factors, such as organisational culture, structure and strategic priorities. The traditional centralised payment factory occurs where a limited number of people in one location manage the payments and collection processes for a specific region. It is not unknown for a corporate to manage its entire European payments infrastructure using a small number of people operating in a shared service centre.

The virtual or decentralised payment factory allows some roles and responsibilities to be retained at subsidiary level but the entire organisation uses one central platform for managing payments, bank connectivity and relationships. Larger corporates may deploy a worldwide, decentralised model with hundreds of users. It is important to note that although these approaches are at opposite ends of the spectrum, they both allow corporates to enjoy similar benefits.

Assisting Treasury. A good Treasury Management System (TMS) has many qualities and benefits for treasury. But usually they are not built to handle large volumes of bulk payments and the treasury team may not want users outside the treasury to access their platform. Furthermore, licensing models can make it prohibitive for non-treasury personnel to use a TMS just to view local bank accounts or work on cashflow forecasts.

For these reasons, it is sensible to create a separate payment factory, designed for a range of payment types (including bulk payment and Direct Debit files) and for a wider group of users, who can each see their local or regional activity without accessing the overall enterprise treasury position.

A corporate can maximise the benefits of a payment factory by employing best practices in five critical areas:

- Secure controls and standardised processes

- Streamlined global payments

- Robust multi-bank connectivity

- Effective liquidity management and cashflow forecasting

- Preventing fraud and financial crime

Let's explore these five areas in more detail.

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*Improve visibility,
security and control.*
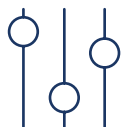
Uncovering the Five Best Practices

Secure Controls and Standardised Processes

Current Situation

All organisations have some kind of internal control framework to manage which employees can perform specific tasks, such as making payments or viewing cash balances on bank accounts. Driven by regulations such Sarbanes-Oxley and the need for strong corporate governance, there is a continuing drive to improve internal controls and financial reporting across the enterprise. These regulations require organisations to ensure proper internal controls and to record these rules. But in a worrying number of cases the internal control system is heavily reliant on employees respecting the rules, or on using technology to enforce business rules. Payment systems themselves may be too easily accessible, allowing bad habits creep in, such as one person performing too many aspects of the payment life cycle, with the power to prepare and submit payment instructions. An extreme example of lax controls is that password details on post-it stickers might be left on desktops when a member of staff is absent, so that others can perform that person's duties.

Treasury teams are often over reliant on excel spread sheets and other manual processes for performing mission-critical tasks. This can be error prone, lacks security and it is difficult to maintain version control. Another operational risk is that even after a payment file has been properly approved by an authorised signatory the file might still be exposed to the risk. It could be tampered with to fraudulently modify the bank account numbers or the values of individual payments.

Industry Best Practice

An efficient payment factory must therefore provide a platform for strengthening internal controls and visibility of banking, payments and treasury activities.

Visibility of activities. This requires a powerful but flexible approval workflow, with configurable entitlements for definable user groups, based on multiple approval levels by payment type, templates and transaction limits. The allocation of these entitlements should be controlled by system administrators who, in accordance with best practice principles of segregation of duties, should not have any direct powers within the payment approval process itself. The system should generate automatic alerts triggered by specific business conditions, such as payments awaiting approval, error corrections, incomplete approvals, or payments rejected. Such automation will improve throughput and productivity.

This firm control allows for the standardisation of procedures across the enterprise, with full audit trail of who does what and when. Similarly, access to bank account and reporting information must be available throughout the business in a timely manner, but it must only be accessible by personnel who have been duly authorised. Some users will have entitlements for only their specific division or geographies, while other users, such as those in treasury, are granted powers across the enterprise.

Minimise risk. Operational risk can be greatly reduced by introducing greater levels of automation, eliminating paper-based processes (e.g. faxing bank statements) and reducing manual intervention in the payments lifecycle.

More timely access to payments data allows faster and more accurate reconciliation, while costly investigations can be reduced via strict data validation and matching rules which minimise potential user errors and contribute to lower operational risk.

It is important that corporate payment instructions are complete and properly formatted, in order to minimise the need for bank repairs. A number of banks have introduced split pricing: Lower pricing for payments which achieve straight through processing (STP), but higher pricing on those transactions where the bank has to intervene to repair a payment. In order for corporates to raise the quality of their payment files submitted to their banks, they must be able to validate payments and check routing codes, such as UK sort codes and account numbers, BICs and IBANs or US ABA codes. This automated validation should result in lower bank charges, especially where banks are charging higher fees for repairs and manual intervention.

A central hub. Payment factories are particularly well suited to organisations which have multiple ERP systems, perhaps as a result of M&A activity or due to the prohibitive length and cost of some ERP rationalisation programmes.

In terms of streamlining payments and cash management, it is generally much faster and far more cost effective to create a payment factory which becomes a hub between disparate ERP systems, the Treasury Management Systems (TMS) and various forms of secure multi-bank connectivity. With data reformatting being a core requirement, you need a hub that is able to exchange data with multiple legacy systems, without any need to modify these systems, as well as provide banks, clearing and settlement systems with the exact formats required for straight through processing.

2 Streamlining Global Payments

Multiple payment types drive lowest cost routing and maximum efficiency

Current Situation

Ironically, a common technique used by specialists in international cash management is to minimise the use of cross-border payments and instead use domestic payments wherever practical. This is because domestic payments, in particular Automated Clearing House (ACH) payments, are generally lower-cost and more reliable. Under this tried and tested in-country banking approach, treasurers typically open bank accounts not only in countries where they have subsidiaries and branches but also in countries where they have a concentration (i.e. high volume) of payments or collections.

The treasury team generally funds these in-country accounts by means of low volume but high value cross-border payments for the aggregate amount of a domestic payments file. Once the funding is on account in-country, a file of domestic payments is sent to the local bank with instructions to make these disbursements via ACH or local wire, depending on the urgency of such payments.

Collections or Direct Debits (DDs) can be handled in a similar way. Domestic format DD files are sent to the local bank which in turn submits them to the local ACH. Once these monies are received, the treasury may decide to leave the funds in-country, especially if there are imminent disbursements to make, or any surplus funds may be swept back to head office or regional bank accounts.

Industry Best Practice

It is vital to take into account any local differences in markets where the corporation has a significant flow of payments and collections. For example, UK payment schemes allow Direct Corporate Access to Bacs and the Faster Payments Service. This is different to other countries, where corporate payment files are submitted to the local Automated Clearing House (or ACH) via their payment banks. It is important to find a solution which incorporates these local requirements in order to benefit from maximum flexibility and lowest cost routing.

The payments and collections managed by a payment factory will be primarily electronic payments of course, especially in European payment factories. But in North America, Asia and to a lesser extent in countries such as France and Ireland, it is still important to be able to manage the controlled production and distribution of cheques. In addition to enabling on-premise cheque printing capabilities, the more sophisticated payment factories allow outsourced cheque production. Under these arrangements, an electronic file of cheque payment data can be approved securely using the platform's workflow. These instructions are then sent to a secure third party printer where the cheques are printed and inserted into envelopes, along with remittance information. The envelopes are then distributed by mail to beneficiaries. These multi-currency cheques should be specially designed to clear on local bank accounts, to avoid high bank collection charges for the beneficiary.

SEPA: the starting point. The launch of SEPA (the Single Euro Payment Area) is proving to be a catalyst for many organisations to implement payment factories on a regional or even global basis; and collection factories projects are also growing in popularity.

During the migration, many corporates were so focused on doing the bare minimum to comply with SEPA, that they understandably neglected the strategic benefits of this major initiative. In principle, a payment factory could have been rolled out simultaneously to a SEPA compliance project; although in practice a payment factory initiative is more likely to be treated as a second phase.

So for larger corporates with units in multiple locations, there are many strategic opportunities to streamline payments and reduce costs by creating payment and collection factories. And SEPA is the ideal starting point for a payment factory project.

For corporates who are already SEPA compliant, they will have achieved:

• Standardised euro payment and Direct Debit instruments across the Eurozone, using the ISO 20022 format

• Standardised and centralised internal processes

• Lower processing costs and a lower number of bank accounts in the Eurozone

• Reduced fees on compliant Credit Transfers and Direct Debits

• Lower operational risk and easier audit

• Improved cash flow forecasting and reconciliation

Now the opportunity is to go beyond the Eurozone and SEPA, to achieve similar benefits in other currencies and geographies. Looking beyond mere tick-box SEPA compliance, payment factories are ideally placed to become the core platform for streamlining multi-country payment and collection arrangements.

Beyond SEPA. There is an additional exciting opportunity to leverage the flexibility of ISO 20022 which has been adopted by many corporates and banks to comply with SEPA. As well as being the required format for SEPA files, this open standard is increasingly being used by major transaction banks, to make it easier for their corporate customers to make bulk payments in other countries, outside the Eurozone.

Over 30 banks and a handful of technology providers, including Bottomline Technologies, are collaborating on an ISO 20022 initiative, called Common Global Implementation – Market Practice. The aim of this industry initiative, which is co-ordinated by SWIFT, is to simplify global payment projects for corporates and non-bank financial institutions.

Using Common Global Implementation formats in XML positions an organisation to create a truly global payment factory. Adoption of these Common Global Implementation standards will help multinational corporations reduce the time and effort involved in implementing projects for payment instructions and cash reporting with their multiple banks. With these standards, a corporate should be able to use the same message structure with all of their transaction banks across the globe.

The increasing use of payment factories, handling both payments and Direct Debits in a standardised manner, is set to drive the wider adoption of managing payments-on-behalf-of (POBO) and collections-on-behalf-of (COBO) multiple entities.

The SEPA ISO 20022 format includes a dedicated field to indicate the entity on whose behalf the payment is made, or to whom the credit belongs. This simplifies the reconciliation process for beneficiaries and therefore makes POBO and COBO feasible, whereas before it was impractical.

Improved visibility and control will at last allow organisations to reduce the number of bank accounts held internationally, which has long been a source of working capital inefficiency and a heavy drain on management time.

3

Robust Multi-bank Connectivity

Current Situation

Most medium-sized to large organisations have multiple bank relationships and use a wide range of e-banking systems. The trouble is that each one of these systems is different, with disparate protocols, passwords, smartcards or USB tokens. In some cases, payment instructions from ERP or treasury systems are not in the right format for each electronic banking platform. This can result in re-keying of instructions, leading to errors and delays. Another issue is that some payment files are imported in a non-secure environment. There is a risk that these files can be tampered with, to the point that account numbers and amounts on individual payments can be modified in a fraudulent manner.

So unfortunately, we have disconnect between the corporate's back office systems and their banking partners, with inefficient and insecure processes. This leads to a risk of error and potential fraud. A payment factory securely integrated into ERP and treasury systems, and providing secure connectivity to multiple banks can solve this back office disconnect.

Industry Best Practice

Secure multi-bank connectivity is at the core of most successful payment factory initiatives. Increasingly, corporates and non-bank financial institutions are joining SWIFT as a proven way to achieve a range of financial, operational and strategic benefits, such as:

- Improved visibility of bank accounts, leading to better liquidity management

- A secure and resilient interface to multiple bank relationships

- A bank agnostic form of connectivity, delivering greater bank independence

- Access to multiple payments types, such as domestic and cross-border wires, as well as bulk payments and direct debits

- Reduced costs through standardised messaging and straight through processing (STP)

- Enhanced control, audit and non-repudiation of messages

- Reduced operational risk and compliance

Gain peace of mind and lower total cost of ownership by outsourcing

Using bureaux. Most corporates joining SWIFT decide that the easiest and most practical way to connect with the messaging network is via a SWIFT service bureau.

The benefits of outsourcing to a bureau are:

- Expert advice and "hand-holding" on joining SWIFT and connecting to the network

- "Go live" faster and more easily

- Lower total cost of ownership, with no new hardware or software required in-house

- No need to hire SWIFT expertise in-house

- Eliminate the risk of having to maintain a SWIFT interface in-house

- Reduced operational risk, in terms of proven resilience and DR, with 24/7 support from experts

- Future proof against up-grades to the SWIFT infrastructure, which are handled by the bureau

- Easy access to value added services like data transformation

- Flexible pricing, typically on a subscription basis, so you only pay for what you use in terms of message volumes and modular functionality.

It is important for cloud-based payment factories to have secure multi-bank connectivity. It is therefore an advantage for corporates to select a technology partner which not only offers cloud-based payments solutions but is also a SWIFT service bureau, with expertise in connecting securely with a wide range of banks internationally.

There are a small number of super bureaux which are offering a growing range of protocols and connectivity options, such as host-to-host solutions and EBICS, the latter of which is widely used for secure corporate to bank communication in Germany, France, Benelux and Switzerland. EBICS is cheaper than using SWIFT in these countries, which means a super bureau can structure a solution that best suits a customer's needs, according to its geographical footprint. Another valuable element of super bureaux flexibly structured solutions are host-to-host pipes. These enable customers with large volumes of payments to exchange bulk files securely with their bank, without the need to join SWIFT. These host-to-host pipes typically connect with the bank via SFTP, leased lines or virtual private networks (VPNs).

Another example of the lowest cost routing that can be achieved in the UK is of course Bacs, which is an efficient and cost effective scheme offering Direct Corporate Access to VocaLink for clearing and settlement of Sterling payments. There is a growing market trend for corporates operating in the UK to adopt Direct Corporate Access for Faster Payments, for which the number of sponsor banks is set to increase.

By combining a SWIFT bureau with outsourced Bacs and Faster Payments capabilities, a cloud payments solution provider is ideally positioned to offer its customers an optimal platform for efficient payments and cash management, spanning multiple payment types, protocols, connectivity options and messaging networks.

Selecting a bureau. Good advice to a treasurer selecting a SWIFT service bureau is to look for a partner who is more than just a bureau: it needs to be a solution provider with a proven track record of customer success. With growing adoption of cloud-based solutions, a new breed of super bureaux are emerging which belong to larger software providers of payment and cash management solutions. These service providers offer a fully outsourced payment factory solution with integrated multi-bank connectivity. It makes sense to obtain this flexible bundle of solutions as an integrated service from a single provider, rather than going to a bureau for connectivity, a separate software provider and then an third party hosting provider. Similarly, a larger organisation is better placed to deliver greater value and meet a wider range of treasurers' needs, both now and in the future.

Bureaux holding international attestations such as SSAE 16 provide additional comfort in terms of their robust processes and resilient infrastructure. Bureaux hosting SWIFT interfaces and software on servers in a secure and effectively bomb-proof data centre, with proven contingency and DR, should give the necessary assurances and peace of mind to even the most demanding corporate treasurer and Head of IT. Likewise, it is important to select a solution provider with the scale and financial stability to guarantee not just service continuity today, but also that the provider will be around for the long term and will continue delivering value and innovation.

A payment factory which is hosted securely in the cloud and connected to multiple banks can deliver a lean and agile infrastructure for the corporate: And it can cope with current and future regulation and changes in market practice. This facilitates operational efficiency and enables corporates to rapidly scale up (or down) as business volumes change.

A treasurer should select a bureau with the domain expertise to act as a trusted adviser, who can help solve cash management challenges. Although many banks are increasingly willing to allow their multi-banked clients to connect via SWIFT, on-boarding can be time-consuming, with each bank adopting a slightly different approach. It is therefore wise to select a bureau which has strong relationships with banks and a track record of on-boarding corporates to multiple banks.

Select a bureau that can act as a trusted adviser, helping to solve cash management challenges

4 Effective Liquidity Management and Cashflow Forecasting

Current Situation

Most organisations do not have the instant visibility and control they need to optimise working capital. Payments and cash positions are tracked separately, and the combination of globalisation and mergers and acquisitions has led to an expansion of international and domestic banking relationships that further fragment process and control.

Reporting across disparate internal systems and multiple banks is extremely challenging for most enterprises. It requires time-consuming data compilation from multiple sources and often involves manual efforts that are prone to errors and inconsistencies. In addition, the information reported is not in real time, which means financial executives are often making decisions based on outdated information.

The increasing complexity of banking relationships and the need to consolidate balance and transactional data affecting available working capital requires both global accessibility and real-time visibility. It is no longer viable for companies to be operating on partial or out-of-date information. Accurate, timely, and complete accounts payable and banking information is critical for overall corporate success. Best-in-class companies are adopting an integrated payments solution that provides real-time global access to transactional information and account balances.

Industry Best Practice

A payment factory provides visibility over all bank accounts across the enterprise and gives a clearer picture of cash flowing into and out of the organisation. Automated the reporting of cash balances directly from subsidiaries' bank accounts ensures that accurate and up to date data can be provided to the treasury team and other payments specialists, which is essential in determining the true cash position at any point in time.

Calculating your cash position. Experience shows that a rapid return on investment (ROI) on a payment factory project can be achieved simply by improving the management of cash and there are instances of corporates gaining access to significant sums of cash that were previously hidden away in overseas bank accounts. These balances can now be mobilised for the benefit of the corporate as a whole.

Cash forecasting and efficient liquidity management are an important part of a treasurer's role. Cash forecasting, pooling and sweeping, regularly appear high up on the list of initiatives which corporates would most like to implement.

Treasury teams that still rely on excel spread sheets and manual processes are prone to errors and security breaches. To optimise these processes, it is important for corporates to be able to take data from over-night bank statements and to combine this with intra-day statements, as well as credit and debit notifications and outbound transactions. This enables an organisation to calculate its latest cash position. This can be done on a continuous basis during working hours. By gathering all of your bank account and transaction data in one place, you can build an accurate picture of where your cash is.

Bank statements are pivotal to cash forecasting. The receipt of a SWIFT prior day statement is the starting point for this cash management process. Within a payment factory, transaction matching functionality should reconcile your expected credits and debits with bank credit and debit notifications or intra-day statements. Real time reconciliation between outbound and inbound flows ensures the accuracy of the current cash position to give you a complete picture.

Account hierarchies are created to build reporting groups. Normally these can be expanded or collapsed on screen, allowing users to drill down from the top line to individual transactions. Cash forecasts are built around a cash ledger which holds the transactions that need to be considered when creating short term cash forecasts. An efficient system automatically maintains the cash ledger, using message flows to and from banks, as well as any integrated ERP or Treasury Management Systems.

An organisation's expected or future dated transactions are combined with uncleared items from your banks to predict your future bank balances over the coming days, on a fully automated basis. A user can modify and amend the forecasts. And the treasury team can post one off or recurring transactions directly into your forecast. This all helps you ensure your forecasts are accurate and ready for reporting. The same information used to create cash forecasts can be combined with business rules to manage cash sweeping and pooling.

Sweeping and pooling. Working in conjunction with cash forecasting, some systems allow you to set up automated sweeps and cash pools. This can be simply for reporting purposes or to automate cash concentration and funding for your organisation. By associating an account hierarchy of parent and child accounts with rules establishing balance thresholds, an efficient sweeping system can work out the optimum set of bank transfers for your organisation's liquidity management. The treasury team can then accept or amend these recommendations and the system will create the definitive transfers and place these in a workflow queue for approval and submission to the bank.

Efficient reconciliation. Another important activity in any organisation is reconciliation. Many different bits of data need to reconciled, on an increasingly regular basis, such as once a day or even real-time. This is required to reduce operational risks and avoid errors. Examples would include reconciling bank statements with cash ledger or reconciling securities holdings. A topical example of the need for daily reconciliation is EMIR, the European Market Infrastructure Regulation, which has recently come into force. This regulation requires over the counter derivatives such as forward foreign exchange transactions to reconciled and reported to new entities know as Trade Repositories, on a daily basis. Enterprise reconciliation solutions are increasingly being delivered in the cloud, as outsourced services, hence reducing total cost of ownership.

It is important to combine data transformation with reconciliation, as data can often arrive in disparate formats so may need to be normalised before reconciliation. It is particularly valuable to be able to handle pdf reports, by scanning the images and converting this into data which can then be converted into the required format.

5 Preventing Fraud and Financial Crime

Current Situation

Throughout the business world there is increased emphasis on fighting financial crime, including but not limited to that perpetrated by cyber-criminals, and covering 'Know Your Customer' (KYC), anti-money laundering (AML) and compliance with economic sanctions. While financial institutions are clearly at the forefront of the fight and are the primary focus of regulations in this area, corporates also need at the very least to be aware of the various regulations.

Industry Best Practice

Increasingly, and depending on the degree to which they do business across borders, corporates may need to implement increased controls, not only to remain compliant but also to be able to provide audit trail information about suspicious beneficiaries, payments and transactions flagged by their banks. If a corporate is able to screen a transaction against a sanctions list before submitting it to a bank, the management team will have additional peace of mind as this approach avoids the reputational risk of being identified by its bank as having proposed payments to black-listed organisations or individuals.

Creating a payment factory with an integrated sanction screening capability is a significant advantage in the fight against crime. In addition, similar screening solutions can be deployed to identify inappropriate payments being directed to employees' private accounts, thus helping to prevent internal fraud issues.

Early Warning Signs. In the fight against fraud, it is hugely valuable for a business to be able to track its employees' use of mission critical applications, to identify any anomalies and suspicious behaviour. This non-intrusive way of monitoring user activity enables a corporate to capture and replay such behaviour, rather like a CCTV, not only recording any information, such as account numbers, which have been changed, but also tracking which screens have been viewed, without tampering with data. Having such systems in place offers an early warning of inappropriate behaviour by employees and also acts as a strong deterrent to anyone thinking of committing a fraud. In the worst case scenario, this recorded activity can also be used as evidence in legal proceedings, reducing the likelihood of further fraud.

Another way to prevent fraud is to integrate within the payment factory a system which identifies anomalies and alerts management to any payment files which to not conform to normal patterns. For example, this anomaly detection would be activated if a duplicate payment file is detected or if a payment value is higher than preconfigured thresholds. This capability not only helps prevent fraud but also identifies operational errors, such as failure to submit a payment file by a certain deadline.
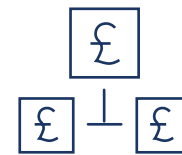
Future Developments in Payments

While cost has traditionally been the main driving factor behind the adoption of the payment factory model, drivers have now evolved to include security and compliance as well as business process improvement. Today most CFOs adopt the payment factory model because it provides compliance and tangible operational efficiencies for their organisation.

Looking ahead, payment factories are reaching a level of sophistication that goes beyond operational efficiency and now touches on working capital management. Indeed, this model provides numerous opportunities to improve working capital, such as using Direct Debits, which provide a higher degree of certainty about the amount and timing of a payment, enabling easier reconciliation, more accurate cash flow forecasting and improved DSO (Days Sales Outstanding). Similarly, invoices can be distributed electronically, which is faster and as well as cheaper than paper and helps to reduce DSO and accelerate cash flow.

Significantly, there is also a growing trend of strategic collaboration with suppliers along the supply chain. It is important to give suppliers visibility into when and how they will be paid, so much so that not being able to provide this information can become a competitive disadvantage. There are a growing number of implementations where a payment factory feeds a supplier portal – a place where suppliers can submit invoices electronically, check the status of their invoices, see when they are going to be paid and download remittance information. These supplier portals create the ideal platform for a buyer to negotiate early payment discounts with suppliers, via dynamic discounting, or to partner with banks to provide supplier finance. This helps suppliers to improve their cash flow and cost of borrowing, while simultaneously positioning the buyer to negotiate extended payment terms, hence improving the buyer's own DPO (Days Payables Outstanding).

The payment factory model is by no means a new phenomenon but it is evolving rapidly to meet the needs of corporates as their requirements change. It will most certainly continue to be an important tool in the strategic pursuit of centralisation, process efficiencies and better working capital management.

A robust payment factory is an integrated solution that addresses the complex business processes surrounding global payments and cash management

The Rise of Instant Payments

One of the most important developments in the payments landscape is the adoption of real time payments, which can also described as immediate payments, instant payments, or even Faster Payments, as in the UK. Increasingly, users of payment services expect their payments to be available 24 hours a day, 7 days a week and 365 days a year. They also want payments to be easy to use and to reach their destination immediately. A growing number of countries already have real-time payment schemes, which have been widely adopted, especially by consumers. For example, the UK, Switzerland, Singapore, Sweden and Denmark all have successful 24/7 real time payment systems in place.
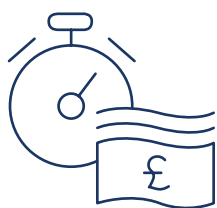
In this fast-changing landscape, it is ironic that SEPA could already be considered as looking just a tiny bit old fashioned. This is despite the fact that SEPA went live only a couple of years ago and undoubtedly represents a major improvement on the fragmented payment systems which preceded it. But today SEPA payments are only available 5 days a week, they have a cut-off time in the afternoon and funds are not credited to the beneficiary until the next business day. Arguably this model no longer meets the latest use cases and customer expectations in the digital world. It is therefore exciting news that the European Payments Council (EPC) is developing a new scheme for SEPA Instant Credit Transfers, as summarised below:

- The new scheme will be available 24/7 and 365 days a year.

- Money will be in the beneficiary's account within 10 seconds.

- The maximum amount of a payment will be 15,000 euros, initially. This limit is likely to be raised in due course, as has happened in countries with more experience of real-time payments.

- The new real time euro payments will be available in the 34 countries covered by SEPA.

- The new scheme will use ISO 20022.

- SEPA Instant Credit Transfers are due for launch toward the end of 2017.

Banks are already extremely busy with numerous other demands on their time and budget, not least of all regulatory compliance. But most banks acknowledge that they need a proposition to meet the digital demands of their customers, both consumers as well as businesses. These customers want real time payments in euros, just as many of them already have real time payments in Pounds Sterling and Swiss Francs. More than 40 banks have signed up for the EBA Clearing Working Group on Instant Payments. EBA Clearing and a number of other clearing and settlement providers have committed to launching SEPA Instant Credit Transfer solutions in the next year or two.

EBA Clearing has already published its functional specifications for connecting to their new central infrastructure, which should be live in the latter half of 2017. However, the biggest risks are fragmentation and interoperability: As mentioned, there will be multiple central infrastructures for SEPA Instant Credit Transfers, such as STET, Equens, Iberpay, SIBS, and each solution is likely to be slightly different, despite all being compliant with the EPC scheme. EACHA, the European Automated Clearing House Association, is drafting a rule book for interoperability, which should help.

It is of particular note that EBA Clearing is proposing to work with Certified Technical Service Providers. This will be an efficient way of connecting the large financial community and encouraging wide adoption of this new payment instrument by banks and Payment Service Providers of all sizes. This model is similar to the Aggregator or New Access Model which was developed for the UK Faster Payments Service. This easy and cost effective way to access Faster Payments is helping to meet the UK Payment Systems Regulator's objective to improve competition and open up the UK's payment systems to more participants, as well as driving innovation.

The Adoption of Aggregator Services

In the UK there are a handful of Fintech solution providers which have been accredited by the Faster Payments Service for the New Access Model. This is basically an outsourced service for banks to gain true 24/7 and real time access to the central infrastructure for Faster Payments. In addition to managing Faster Payments, an Aggregator platform can be used by banks and Payment Service Providers to access multiple payment and securities schemes, such as Target2, SIC, Euroclear, EBA as well as Bacs. Essentially it is a multi-protocol and multi-network platform which makes it easier, faster and more cost effective to access all the schemes and counterparties which a financial institution or a corporate wants to work with.

It will also offer a simple way for banks and Payment Service Providers to quickly get the best out of the new SEPA Instant Credit Transfer scheme and develop competitive propositions for their customers. A growing number of corporates are recognising the benefits of real time payments. Examples of use cases for corporates include the development of differentiated customer and supplier propositions, such as:

- Immediate payment against rapid delivery of services or goods, hence enabling just-in-time inventory.

- Faster payment to suppliers in return for an early payment discount.

- Instant reimbursements, thereby improving the customer experience when resolving a complaint or returning a purchased item.

- Payroll for contract or temporary personnel.

Outside of Europe there are other important initiatives to create real-time payments systems, for example in the US. The Federal Reserve Bank is running an ambitious initiative to modernise US payments systems and has formed a Faster Payments Task Force, made up of banks, consultants and Fintech firms. The group's objective is to identify and assess alternative approaches for safe and ubiquitous faster payments. In mid-2017 the Task Force will publish its findings and recommendations.

Meanwhile, the latter part of 2017 is the proposed launch period of an important immediate payment initiative in the US by The Clearing House, which already processes USD2 trillion of transactions every day through CHIPS (high value payments) and the Electronic Payments Network (ACH for bulk payments). Like other instant payment initiatives, The Clearing House's Real Time Payments (RTP) service will be available 24/7 and 365 days a year and will use ISO 20022, but it will also go much further in terms of its rich message set and functionality. The Clearing House's RTP messages will integrate neatly with ecommerce by covering not only Payment Instructions and detailed Remittance Advice information, but they will also span A Request for Payment (to be used to ask customers for payment, effectively an e-invoice linked to payment initiation), as well as Payment Acknowledgement , Request for Information and Response messages.

It is significant that, like EBA Clearing's plans to collaborate in Europe with Technical Service Providers, The Clearing House's RTP in US also includes partnering with Third Party Service Providers. In both cases, these Fintech firms will help connect the financial community of banks and payments service providers with the central infrastructure. So Aggregator Services have a significant role to play not only in the New Access Model to the UK Faster Payments Service, but also in the planned instant payment initiatives in the US and EU.

2 The Acceptance of Blockchain / Distributed Ledger Technology

One of the hottest topics in the payments business is Blockchain, which is also known as Distributed Ledger Technology (DLT). In the last few years there have been a growing number of articles, webinars and conferences advocating the potential of DLT to make financial services and payments more efficient. Vast sums of money are being invested and almost every day there are announcements of DLT initiatives by banks, consultants, central infrastructures and Fintech firms, which are launching prototypes and proofs of concept to test use cases and deepen their understanding of DLT. The wide number of disparate initiatives is typical of an early stage development cycle for new technologies, when numerous different models are explored in parallel. But it is clear that the financial services industry has moved from the hype phase into practical testing and exploring how best DLT can be applied.

Blockchain is a distributed ledger, or asset database, which is shared across a network of multiple sites or organisations and is used to record the secure transfer of assets between two or more parties. All participants within the network have their own identical copy of the ledger and any changes to the ledger are reflected in all copies. It can be helpful to think of DLT as a distributed but single version of the truth, or a trusted "Golden Copy." In transaction banking, the type of use cases being explored span may scenarios, such as cross-border payments, capital markets clearing & settlement, as well as automating supply chain finance in international trade. Today these activities tend to be slow, complex and manually intensive, involving multiple players interacting with each other.

Access to a distributed ledger can be either permissioned or permissionless, the latter of which means anyone can participate in the ledger. But for the the financial services industry there is already general agreement that distributed ledgers will need to be private and permissioned, ensuring proper identification and controlled access for any participants. DLT was originally linked with Crypto-currencies, such as Bitcoin, but it is now increasingly seen as a separate technology, especially in the highly regulated financial services industry.

A key advantage of DLT is that it mutualises infrastructures, hence sharing the costs of processing and reconciliation systems. In a period of low interest rates and high capital requirements, banks desperately need to cut costs and improve operational efficiency. DLT therefore offers great potential in achieving these goals, with claims that it will reduce costs by 30-50%. DLT improves visibility and the speed of transactions, meaning that transactions which today take several days to settle can now be completed within seconds. The sharing of a ledger by multiple counterparties also makes reconciliation much easier, since counterparties see the same version of the transaction and therefore greatly simplify the arduous process of reconciling disparate ledgers.

As all participants to a distributed ledger have a copy of the ledger, this reduces the risk of system failure, hence enhancing resilience at a reduced cost. A further underlying advantage is that distributed ledgers are immutable, which means that once a transaction is recorded it cannot be modified or deleted. All transactions on a distributed ledger are verified and recorded cryptographically, which not only provides consensus and improves levels of trust that the transactions are correct but also reduces risk of errors and fraud.

The use of smart contracts means that payments or asset ownership transfers can be automatically triggered, as soon as a specified event occurs, for example: satisfying pre-conditions for releasing funds held in escrow; transferring title to a bond as soon as payment is received; approving a commercial invoice or submitting to a distributed ledger valid data confirming shipment of goods. In this way, smart contracts can greatly reduce the time and cost currently spent on manual processes in numerous areas of payments and transaction banking.

Many advocates of DLT believe payments are a key area where this new technology can drive greater efficiencies and faster settlement. In particular, they have identified cross-border payments as offering significant potential for improvement. On the other hand, some domestic payment systems are already relatively efficient. Whilst they could no doubt potentially be cheaper or perhaps faster in some cases, there would only be a relatively small gain achieved if the industry were to undertake the enormous upheaval and risk of migrating a central payments infrastructure onto DLT. It is questionable whether in the short term such a modest improvement would compensate the huge effort and cost involved. Besides, a number of countries already have, or are planning, real time payment systems available 24/7 and 365 days per year, running on conventional technology and central infrastructures, without the use of DLT.

In contrast to relatively efficient domestic payments systems, cross-border payments and correspondent banking appear to offer greater potential for a "big win" in terms of cost, reliability and transparency by deploying DLT. Good examples of the daily complex challenges faced in correspondent banking are cross-currency payments, where the paying bank does not hold a nostro account with the beneficiary's bank; or in more extreme cases, where the paying bank does not hold a nostro in the currency of the payment. In these situations the paying bank currently relies on one or more intermediary / correspondent banks. These extended payment chains usually involve manual intervention and delays. Although not huge in volume, these payments tend to be the most time-consuming, with a higher risk of funds going astray. The solution might take the form of one or more cross-border distributed ledgers to enable banks and their customers to better track payments through the international system. There are a number of interesting initiatives emerging in this area, although there have not yet achieved significant scale or demonstrated commercial viability at this early stage.

The current spotlight on inefficiencies in cross-border payments by DLT advocates has already had a positive effect in prompting action by SWIFT to launch an initiative to improve the transparency and traceability of cross-border payments. Without resorting to DLT, at this stage at least, SWIFT and a group of major banks are piloting a new service, known as Global Payments Innovation (GPI). Their objective is to enhance corporate cross-border payments by leveraging SWIFT's messaging platform and reach. SWIFT proposes a common SLA rulebook for:

- Same day availability of funds, and in some cases real-time.

- Transparent and predictable fees: the amount transferred to the seller's account will be known, with no deductions by the receiving bank.

- End-to-end payments tracking: banks will send back a confirmation to the buyer that the seller's account has been credited.

- Extended remittance information will be transferred unaltered to the receiver, facilitating reconciliation of payments and invoices.

The GPI pilot is already well underway, with encouraging results, and the service will be commercialised in 2017, with over 100 banks already signed up to participate.

In addition to the big areas of opportunity, like payments, capital markets clearing & settlement and supply chain finance already mentioned in this paper, here is a short list of other possible use cases where DLT could greatly simplify current processes:

- KYC (Know Your Customer).

- Identity management.

- Reference data for payment routing.

- Sanction filtering AML (Anti-Money Laundering) black lists.

- Regulatory reporting by banks and financial institutions.

- Peer2peer payments and micro payments, supporting the Internet of Things.

There is much debate about how long it will take before DLT goes mainstream. Some of the more bullish commentators predict that we will have significant adoption of commercial solutions using DLT as early as 2019. Meanwhile, more conservative analysts believe we are still 5-10 years away from the industrialisation of DLT in transaction banking.
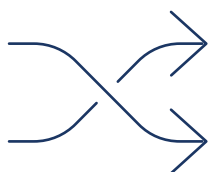
Notwithstanding the tremendous potential of DLT for streamlining a multitude of use cases in payments and transaction banking, it is widely recognised that there remain a number of obstacles to large-scale adoption of this new technology. Positive progress continues to be made but the following examples give an indication of the level of work still required:

- There will not be any large scale adoption of DLT until the regulators are comfortable with this new technology. The financial services industry is a highly regulated sector and trillions of dollars are exchanged daily on the major international markets. It is unthinkable that the principal players will migrate to new technologies without the full blessing of the regulators. It is encouraging to see the pragmatic approach adopted by regulators, such as the Bank of England and the Financial Conduct Authority, which are taking a close interest in the potential of DLT and establishing how this technology can be deployed safely in a properly regulated environment.

- For DLT to prove acceptable in financial services, it is essential to ensure the right level of transparency and confidentiality, based on the varying roles of participants, such as regulators, counterparties to a transaction or other market participants. Commercial terms of contracts need to remain confidential and privacy needs to be configurable, so that counterparties can see only the transactions for which they are permissioned. Work is still under way on the cryptography needed to ensure such identity management and privacy on distributed ledgers.

- The scalability of DLT is still not definitively proven in action, given the modest nature of existing prototypes and the few commercial platforms launched to date. The volumes currently transacted on DLT are tiny compared to the enormous turnover processed on large infrastructures in payments and capital markets clearing & settlement.

These examples of just some of the obstacles to full adoption of DLT underline that Blockchain is still in its infancy, relatively speaking. But work is continuing apace to address these issues and capture the anticipated benefits of this exciting new technology.

In the light of the large number of prototypes and proofs of concept being worked on by banks and Fintech firms, it is increasingly likely that there will be not just one but multiple commercial distributed ledgers to be launched over the coming years. This means there will be a need for banks and businesses to connect with wide range of distributed ledgers. Just as we are already seeing in the evolution of instant payment initiatives across the world, Aggregator Service Providers are well positioned to provide a secure gateway into the growing number of distributed ledgers. These Aggregator platforms will provide an increasingly rich set of value add services, such as data transformation, transaction validation, KYC / AML and other risk management measures, to make it safer, easier and more cost effective to capture the benefits of advances in technology such as immediate payments and DLT.

3 Easier, more secure multi-bank payments in UK and Europe

Within the next 12 months the introduction of new regulations in the UK and across Europe will transform the payments landscape, providing corporates, banks and Fintech firms with exciting opportunities to make payments and cash management easier and more secure. It is widely anticipated that competition will intensify, with new entrants offering innovative value propositions and new business models.

Regulators in the UK and EU are driving innovation and competition in payments for both consumers and businesses. They want payments services to be easier, faster and convenient. The two new regulations have many similarities but are not identical, as outlined below. The EU Parliament has approved new rules, known as the Payment Services Directive 2 (PSD2), which member states are mandated to implement by January 2018. The PSD2 creates two new forms of Third Party Providers (TPPs) which will be regulated and will offer Payment Initiation Services and Account Information Services. All Payment Service Providers (PSPs) will be required to allow these new TPPs to access their accounts and payment systems. To enable this access, PSPs are required to develop open APIs (Application Programming Interfaces).

Independently of PSD2, HM Treasury has developed a new framework known as Open Banking to drive competition and innovation in the UK. The Competition and Markets Authority (CMA) has mandated that 9 leading UK banks will develop a standard API to allow TPPs to access banks. As a first phase, by the end of Q 1 2017, the said 9 banks will be required to make available via open APIs information regarding their terms and conditions, branch locations and basic services. This will make it easier to compare one bank with another. The second and arguably more important phase is that the 9 banks will be required to allow regulated third parties to access bank accounts to initiate payments and capture statement information. Originally the Open Banking proposals did not overtly require banks to allow access for payment initiation services. But in late 2016, Open Banking was more closely aligned with PSD2, reducing uncertainly and inconsistencies between the two regulations and making the task facing banks somewhat less daunting.

Now under both sets of new regulations, any organisation which becomes duly regulated, for example by the Financial Conduct Authority (FCA) in the UK, can provide aggregator services for their customers:

• Account information capture from accounts held at multiple PSPs.

• Payment initiation services from accounts held at multiple PSPs.

It is anticipated that non-banks, such as retailers, Telco's and technology companies with large customer bases, will elect to become regulated and develop innovative new services to integrate payments seamlessly into an enhanced customer experience. Traditional banks will face increased competition from these new entrants, but equally they will now be able to become "a one stop shop" for multi-banked customers, including other PSPs, and offer services such as:

• Account information aggregation services with analytical tools.

• Payment initiation services from accounts at other PSPs.

• Multi-bank liquidity management.

• Value added services in the retail and corporate markets.

The introduction of Open Banking and PSD2 will present corporates with an exciting opportunity to integrate their UK and European payments and cash management more efficiently. Under the new regulations, Fintech firms with expertise in cloud services and existing multi-banking and multi-protocol capabilities will be well placed to develop new services. These Fintech providers will be able use banks' open APIs to enable corporate customers to initiate payments and aggregate statement information from multiple banks across UK and Europe. At present automated balance and transaction capture services and multi-bank payments solutions are usually only available to larger corporates and banks using SWIFT Service Bureaux in order to access multiple banks. But these new API-enabled payments and account capture services are a natural extension of existing SWIFT offerings offered by Aggregator Service Providers. SWIFT capabilities will continue to play a key role in global cash management solutions in other continents, but it is anticipated that corporates with multiple bank relationships across UK and Europe will increasingly opt to leverage open API offerings coming onto the market from 2018.

This new era of open APIs for payments and cash management is not expected to be a single "big bang" in January 2018; instead, banks, retailers, Telco's and Fintech firms will phase the launch of their new offerings as the market becomes increasingly sophisticated and competitive, with exciting new business models and functionality.

One of the main goals of Open Banking and PSD2 is to increase the security of payments. PSD2 specifically includes key security considerations, such as mandatory use of two-factor authentication; security incident reporting to both regulators and customers; as well as mandatory security assessment reporting to regulators that addresses security measures and their effectiveness.

Challenges do remain for the payments industry to achieve the tight deadlines imposed by the new regulations. Under PSD2, the European Banking Authority (EBA) is tasked with developing Regulatory Technical Standards (RTS). These are unlikely to be in force until September 2018 at the earliest, and may even slip back into 2019, depending on how long it takes to hammer out these much debated guidelines. Several organisations, including an industry heavyweight card provider, have voiced concerns that, as currently drafted, the RTS' Strong Customer Authentication (SCA) rules could severely damage businesses. Under the RTS rules, PSPs will be required to deploy two-factor authentication which can often be onerous, potentially resulting in a loss of business from consumers who prefer "One-click checkouts." It is being argued that the EBA could exercise its right to alter which current use cases do not have to change. However, ecommerce players are concerned that they will not be granted such an exemption and that they will be required to implement SCA, which will result in a deterioration in the current user experience and a loss of revenue.

Adoption of open APIs is not limited to the UK and EU, as other countries are exploring similar initiatives. In Australia, for example, the House of Representatives Standing Committee on Economics Report into the four major banks recently recommended a series of measures similar to the UK, in order to bolster competition and transparency. The principal recommendation is to force banks to expose customer data, product holdings, fees and transactions to customer-authorised third parties via industry-standard APIs, which will be defined by the Australian Securities and Investment Commission. Pre-empting any future regulation, some leading Australian banks are already taking steps to emulate the approach of UK and European banks to open APIs to third parties, as they strive to differentiate their value proposition. So we can expect the adoption of open APIs to spread to other regions over the coming years, further transforming international payments and cash management.

In conclusion, regulations like Open Banking and PSD2 regulations, along with the launch of instant payments in a growing number of countries and the future promise of innovations such as distributed ledger technology, are all compelling examples of the exciting and dynamic ecosystem in which the payments industry is evolving. These three factors are set to drive new business models that will shape and disrupt the payments industry over the coming years.
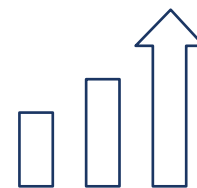
Looking ahead

Innovation with the latest technology and payment instruments will open up a wide range of new opportunities for businesses to streamline their international payments and cash management requirements. Cloud-based Aggregator Service Providers are well placed to help customers to transition to these new solutions, while continuing to leverage existing systems and achieve maximum efficiency and security.

In Summary

To thrive in today's demanding financial environment requires new strategies. The increasing demands of a global supply chain and economy mean that your organisation must become more efficient in its payments and cash management processes. A robust payment factory can provide an integrated solution that addresses the complex business processes surrounding global payments and cash management.

Considerations. For anyone considering where a corporate should start in setting up a payment factory, we would generally recommend talking to people with experience of creating payment factories, that is, other treasury professionals, as well as technology providers. You'll need to consider whether you want the payment factory to be on your own servers, which will be more work for yourselves, or whether to outsource this to a proven solution provider. You should think through the best way of achieving secure, multi-bank connectivity. Many of our customers have found that the most productive next step is to get better visibility of cash by asking banks to send statements on a daily basis, or even intra-day, for particularly active or important accounts. Only once these steps have been taken would you be ready to improve your payments.

A solution of choice. The payment factory model with multi-bank connectivity is an important tool for achieving centralisation and process efficiencies. A payment factory which is hosted in the secure private cloud and connected to SWIFT and other protocols and networks can deliver a robust and agile infrastructure. This cloud-based approach is flexible to cope with changing regulation and a corporate's evolving needs. All this positions an organisation to be more competitive and successful.

Implementing the right payments solution will enable you to adopt best practices in the five most vital areas related to payments management:

- Secure controls and standardised processes

- Streamlined global payments

- Robust multi-bank connectivity

- Effective liquidity management and cashflow forecasting

- Preventing fraud and financial crime

Adopting a state-of-the art enterprise payments architecture in combination with proven industry best practices will allow your organisation to streamline the payment process and achieve new levels of efficiency, control, and, ultimately, profitability.

About Bottomline Technologies

Bottomline Technologies (NASDAQ: EPAY) helps businesses pay and get paid. Businesses and banks rely on Bottomline for domestic and international payments, effective cash management tools, automated workflows for payment processing and bill review and state of the art fraud detection, behavioral analytics and regulatory compliance. More than 10,000 corporations, financial institutions, and banks benefit from Bottomline solutions. Headquartered in Portsmouth, New Hampshire, we delight our customers through offices across the United States, Europe, and Asia-Pacific.

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