

# WORKING CAPITAL MANAGEMENT

HOW SWIFT CAN HELP  
CORPORATES UNLOCK TRAPPED CASH

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## 1 Introduction

Unlike any other crisis before, the credit crunch of 2008 will have a lasting impact on the wider economy across the globe. Companies will be impacted by tighter regulation under Basel II and eventually even more so under Basel III. Liquidity has become and will remain less freely available and more expensive. Credit risk will be a key differentiator in determining availability, pricing and conditions to borrowers.

Consequently, executive management must look deeper inside their own organisations for increased efficiency and opportunities to release trapped cash. A recent analysis of 3,774 companies worldwide suggests that to date no meaningful improvements have been made in the management of working capital. On the contrary, relative to revenue, inventory and receivables positions have increased by an average of 4.3 days of sales or 5% in value. This equates to an additional EUR 183.5 billion of liquidity trapped in the supply chain for all 3,774 companies under review. Buyers have effectively added funding of EUR 55.4 billion, equivalent on average to 1.3 days worth of sales from their suppliers.<sup>1</sup>

Given the ever increasing complexity of international business today, SWIFT has requested Zanders to review the challenges faced by corporate executive management and to comment on how SWIFT can be of assistance in the unlocking of liquidity and reducing the cost of working capital.

The document is structured as follows. First, in Chapter 2 we analyse working capital management. We describe the drivers of working capital and discuss the options for unlocking cash permanently without off-loading the burden on to trading partners. We conclude that corporates can reduce their cash conversion cycle by up to 7 days by:

- improving the availability and quality of management information, so creating more transparency;
- improving internal processes with the help of automation and alignment between business functions; and
- actively participating in and promoting industry initiatives.

In so doing they can create additional benefits by

- a) maintaining less idle cash balances outside the control of central treasury; and
- b) building cost savings through the standardisation, streamlining and automation of operational processes;

Chapter 3 demonstrates that SWIFT is in a unique position to help corporates that want to improve their management of working capital and to support industry initiatives sharing the same objective. SWIFT already facilitates the gathering of information necessary to obtain visibility on cash and control over cash flow with its current solutions for corporate to bank communications. SWIFT can also use its established expertise and reputation in the field of secure financial messaging and standards to support a 4-corner solution for universal reach in e-invoicing. SWIFT can eventually establish a position for itself in e-invoicing similar to that held in the market for interbank messaging and e.g. SEPA, enabling broader networking across the community.

Furthermore, as e-invoicing takes off, SWIFT members will be able to combine invoice related messaging with other solution building blocks developed by SWIFT, such as the Trade Services Utility matching engine and Bank Payment Obligation. Banks can use these building blocks to offer more transparent and robust commercial finance products that will enable them to earn a higher risk adjusted return, predominantly by reducing risk in their credit portfolios (see also paragraph 3.3).

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<sup>1</sup> For more detail and analysis, see Zanders special report on Working Capital (Oct 2010).



## 2 Working Capital Management

Working Capital is a financial metric measuring the amount of liquidity available to an organization as a consequence of its daily operational processes. Even when everyone can agree on this high level definition, the measurement and daily management of working capital will vary widely by organisation. Executive management has recently re-focused on working capital management because access to external liquidity comes with more and more strings attached. Measures taken by governments and the Basel Committee suggest that credit will remain tighter and more expensive for a prolonged period.

This chapter endeavours to frame the discussion on working capital management. As such, it intends to set the scene for a better understanding of where SWIFT corporate solutions fit and what corporates and their banks can build on to make working capital management more efficient, unlocking liquidity from operations as a consequence.

### 2.1 Understanding working capital

The business approach to working capital differs by entity. Bankers typically assess working capital from the perspective of funding and liquidity risk. Corporate (finance) managers would rather assess the topic from a business process improvement perspective. For the purpose of this document we will stay closer to the corporate perspective, and in particular the funding requirement related to the cash locked in the different stages of the cash conversion cycle. The swiftness of the cash conversion cycle and the speed at which for instance inventory is converted into receivables and thereafter into cash defines the level of funding required from suppliers and financial markets for staying in business.

Working capital touches four core business processes (see Figure 1 below). Each of these processes is reflected on the balance sheet by a component that traps liquidity:

Purchase to pay	⇒	Accounts Payable
Production and distribution	⇒	Inventory / Work in Progress
Order to Cash and	⇒	Accounts Receivable
Cash Management	⇒	Cash at Bank / Overdraft

Cash management should explicitly be included in the cash conversion cycle because particularly in larger organizations the cash management infrastructure can be complex. Cash received from customers in one location might not be made immediately available for paying suppliers elsewhere.

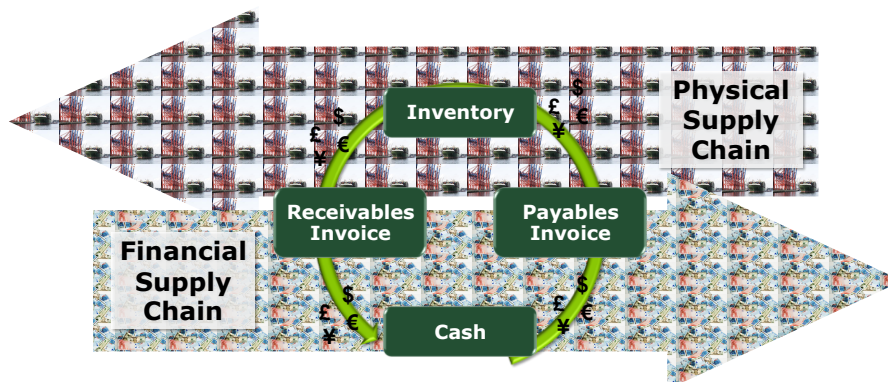


Figure 1: The Cash Conversion Cycle



Working capital is also closely related to two other, more fashionable notions; the physical and financial supply chains. The physical supply chain represents business processes that make products, materials and services, flowing from supplier to customer whereas the financial supply chain represents business processes defining the cash flowing from customer to supplier. The commercial invoice provides the administrative link between processes on the physical and financial supply chains as it registers the conversion between product and cash and vice versa.

Levels of working capital are partially defined by the geographical footprint of a company and the industry a company is operating in, but they can also be influenced by the relative bargaining power of a company and by management decisions.

Different jurisdictions and local market practices explain trade credit terms given to customers to a certain extent, but do not provide a competitive edge. Finland, for instance, has strict rules about credit terms and enforceable penalties for overdue payments, whereas in other countries credit terms may vary significantly. In many countries even the actual terms may be stretched beyond what has originally been agreed. Delayed payment is a “beggar thy neighbour” strategy that may provide some short-term benefit to the payer in financial terms, but will inevitably impact negatively on commercial relationships and potentially on cost price. Because multinational corporates are operating in multiple jurisdictions their working capital performance is not necessarily correlated to standard practices in their home country. This makes peer analysis at a global level feasible based on footprint comparison.

Relative bargaining power and management decisions are differentiators that affect competitive advantage and the levels of working capital. A decision on sourcing, for instance, impacts not only on inventory and cost but also currency risk. However, before discussing the strategies open to management, it is necessary to review the measurement of working capital itself.

Financial metrics like Days Sales Outstanding (DSO), Days Inventory Outstanding (DIO) and Days Payables Outstanding (DPO) are traditionally used as KPIs for working capital management. For every day's worth of sales outstanding the amount of liquidity trapped in the supply chain increases by 0.032% of sales<sup>2</sup>. This implies that for every additional day taken in the cash conversion cycle EUR 3.15 million in liquidity is trapped per EUR 1 billion of revenue.

However, these traditional metrics do not necessarily track working capital accurately. They compare balance sheet positions to sales. By comparing a snapshot value with a period flow value they do not track intra-periodical seasonality or period on period changes in pattern. The ratios can be and are manipulated for reporting purposes and can therefore hide process inefficiencies.

For example, a DSO of 30 days can relate to a single invoice outstanding anywhere between 3 and 60 days; it can relate to an invoice raised on the first day and paid on the last business day of the next period, but also to an invoice raised on the last business day in one period and paid on the first day of the next. It can relate to an even longer outstanding invoice if receivables positions also include provisions for bad debts or cheques received but not yet settled.

Many corporates lag vendor payments at quarter end. This practice has no significant impact on the average payment term but improves financial performance as presented to analysts. Although this practice improves the company's DPO at month end, it also impacts the suppliers DSO negatively and still requires liquidity early in the next period to settle overdue payables. Therefore, it might just be seen to increase the balance sheet totals of both buyers and suppliers with no significant or positive impact on return on investment.

Another example of a widespread business practice that impacts working capital is the sales manager discounting at report period end in order to meet numbers. The consequence of such non-linearity of business is not just a lower gross margin, but also higher intra-period fluctuations in production and cash flow. This results in higher operational cost and lower utilisation ratios and consequently a lower return on investment.

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<sup>2</sup> Calculated at an average of 15% VAT.



A DSO of 30 days can also be related to receivables positions that are paid within one week but with a rebate and a second invoice outstanding for e.g. 90 days. Both cases have a negative impact on margins. Therefore, a distribution of open items is necessary to understand the quality of the future cash flow. In summary, traditional working capital ratios might be useful for trend analysis but do not track working capital accurately.

To calculate the true cost of managing and monitoring the cash conversion cycle requires a more detailed analysis of credit, overdue terms and inventory turnover than is possible using traditional metrics. The real cost of working capital is a function of the period products are kept in stock, when stock is shipped or scrapped, and the time it takes customers to pay their invoices. All financial systems can capture this information accurately. Most can report this detail on open items, but hardly any system is capable of providing standard reports for periods past to the same required level of detail.

## 2.2 Managing working capital

The objective of working capital management is to optimise the cash conversion cycle and consequently to optimise the efficiency of working capital. By doing so, working capital management creates value both directly, by unlocking trapped liquidity, and indirectly, by improving the cost of capital resulting from improved key financial ratios such as interest cover, balance sheet totals and cash levels.

Optimisation is not necessarily the equivalent of minimisation or reduction of investment. Reducing inventory to zero might result in unsatisfied customers and could jeopardize future revenues. By the same token, for some industries excluding payment by credit card will negatively impact sales and might be an unwise sales strategy. Given the global footprint and sector of a company, management can impact working capital levels and thus the liquidity trapped in the cash conversion cycle by daily operations.

There are five levers open to Management as a means of improving working capital. These levers vary in terms of their financial and operational impacts.

Lever	Process Examples	Observations	Financial Impact	Compliance	Operational Impact
<b>Leading &amp; Lagging</b>	Calling customers about overdue receivables, Postponing supplier payments Consignment warehousing	These are effort intensive initiatives that only have an effect on cash trapped in working capital for as long as the effort is made. It requires near real time visibility on cash and a high degree of automatic cash reconciliation to call on customers promptly.  Lagging supplier payments and consignment are "beggar thy neighbour" strategies since both try to off-load the working capital funding requirement to trading partners. In the long run suppliers will try to increase their sales price if they are unable to compensate by process efficiency or economies of scale.	+	N/A	-/-



Lever	Process Examples	Observations	Financial Impact	Compliance	Operational Impact
<b>Terms and Conditions</b>	Alternative business conditions other than price. E.g. enforced penalty interest on overdue items, use of more efficient payment instruments, alternative credit terms.	This requires considerable effort and will have no immediate impact on working capital. However, results tend to be sustained. Once improved terms and conditions are accepted, this is also accepted for future transactions.	+	N/A	N/A
<b>Transparency</b>	Cash visibility Accurate cash forecasting Process dashboards	Accurate and timely visibility on process output allows management to spot bottlenecks and inefficiencies. This creates an ability to focus and prioritise.	++	+	++
<b>Substitution</b>	Factoring, reverse factoring, invoice discounting	When non-recourse instruments are used, financial ratios can be improved substantially. However, the cost benefit is driven by the marginal difference between the funding cost of the scheme and the company.	+		+
<b>Process Efficiency</b>	Automation of payment and collection processes E-invoicing Alignment of KPIs and incentive schemes Risk Management	The benefits of process improvements are lasting and can be substantial. The investments however in terms of effort and cost can also be large. Typically it requires close coordination between departments within corporates and between buyers and suppliers. Extramural collaboration is to some degree dependent on industry initiatives.  Risk management would be aimed up front at incentives for avoiding the risk and pricing the potential writing off on receivables.	++	++	++

### 2.3 Focus for working capital management

Like treasury, working capital management is an aspect of financial management. Whereas treasury already became a separate discipline in the 1970s and a mature profession later on, working capital management is still in its infancy. It is not yet a professional discipline with defined ownership, common definitions, best practices and off-the-shelf applications.

This lack of a distinct working capital management profession is not an indication that corporate executives do not see the importance of it. During the 20<sup>th</sup> century many corporates actively worked on improving the physical supply chain. In the 1980s and 1990s many Japanese corporates and innovative corporates outside Japan, like Dell Computer for example, were highly successful, because they reinvented their production and logistics based on “just-in-time” management and reduced their working capital levels significantly when compared to their peers.



Despite the progress made by corporates in the management of the physical supply chain, few have so far taken an holistic approach to working capital management. The next round of efficiency has to be created by aligning the effort and focus of sales, logistics and finance. A best market practice for working capital management will need to consider the levers as presented above.

Given that this report is focusing on treasury and finance rather than other operational processes like sales and production, the remainder of this Chapter will zoom in on structural improvements related to rows 3, 4, and 5 in the table above.

### 2.3.1 Lever 3: Transparency

Cash logistics is most certainly part of the chain in the cash conversion cycle. Corporates need to maintain cash balances in order to bridge the gap between the timing and location of collections and disbursements and forestall liquidity risk. In reality, corporates maintain larger balances than required from a purely logistical point of view because the information available to treasury is imperfect. The deviation from the theoretical optimum cash levels is defined by:

- visibility on cash balances across the enterprise;
- reliability of cash forecasting; and
- management of cash (out)flow.

Typically, cash balances are made up of 3 components:

- hard core or strategic buffer;
- buffer compensating for process inefficiency and
- buffer compensating for business volatility.

The hard core buffer relates to balances that in any scenario will be at least available and can be used by executive management for strategic decision making e.g. dividend payments, debt repayment and additional investments.

The second and third components relate to the daily and periodic volatility in cash balances resulting from operational cash flow and financial process (in)efficiencies. Working capital and cash management improvements should target these two components with the objective of changing business processes. This will help to reduce volatility and increase the reliability of projected cash balances by impacting the timing of cash flows.

Cash pooling is a technique that also compensates for process inefficiency and business volatility given the timing of cash flows; the more business and bank accounts are grouped, the more likely it will be that volatility in cash balances will be reduced.<sup>3</sup> Cash pooling solutions, however, do not impact the cash flow itself. In more practical terms, corporates would need to focus on the following aspects:

#### ✓ **Visibility on cash balances; you cannot manage a blind spot**

Improving cash flow begins with understanding actual cash positions. Most corporates do not have a complete central overview on cash positions at any time. On average, less than one third of all existing bank accounts are included in central treasury positions. Typically, the bank accounts owned by local corporates and group accounts held at local banks are excluded from the central view (see also Figure 2 below). It is not uncommon for corporates to report cash of which less than 50% is under the control of the central treasury.

Improved visibility can reduce idle cash balances substantially. Detailed knowledge of local bank accounts also helps corporates to advise local management on their decisions about cash; paying local vendors, leaving it on the account or depositing with central treasury.

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<sup>3</sup> See also Bas Rebel; "[Cash Pooling: finding the cost efficient equilibrium](#)" on gtnews.com (September 2005).

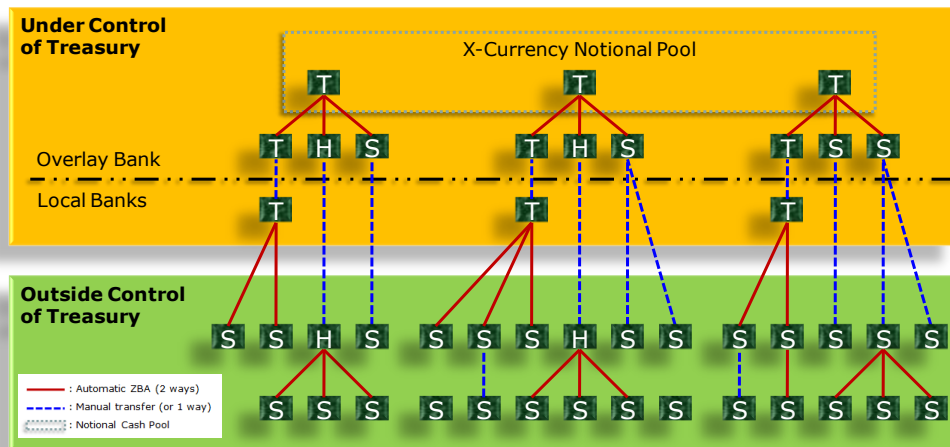


Figure 2: Treasury has control over on average 1/3 of cash management structure only<sup>4</sup>

Paying local vendors might be sensible from a local perspective but might also starve the group of the liquidity needed to pay strategic sourcing partners elsewhere. It therefore increases the demand on overdraft facilities with an increase in interest cost as a consequence. Leaving cash in the account most certainly reduces the return and does not make the cash actively available to the group.

Detailed information on actual and historical cash positions and visibility on historical cash flow for all bank accounts is fundamental for advising local management about changing the timing of payments, the alternative use of payment and collection instruments and the depositing of liquidity with treasury. Furthermore, the lack of instant visibility on cash and cash flow prevents the cash group manager from optimising the return on available liquidity and increases the unnecessary utilisation of credit lines.

✓ **Reliable cash flow forecasting; the cornerstone for working capital management**

Next to instant visibility on cash balances, understanding future cash flow and the underlying drivers is mandatory. Accurate forecasting can disclose idle cash outside central control at an early stage. A reliable understanding of future cash balances reduces idle cash and the need for safety buffers compensating for forecast errors. Based on the experience of international operating companies a reduction in idle cash and safety buffers can easily equate to two days worth of sales.

Furthermore, accurate cash forecasting also facilitates discussions with banks and other stakeholders about business continuity and credit risk; reliable projections on future funding requirements and sound discussions on root causes that explain discrepancies between actual positions and those forecast will improve the standing of the company and have a positive impact on company valuation.

The traditional approach to cash forecasting implies considerable effort from local finance staff for collecting data and from central staff for consolidation and analysis. First of all, corporates use different approaches to short term and long term forecasting. Long term forecasting is typically based on the indirect method using P&L and balance sheet projections resulting from budget and plans as its source. The cash manager typically imposes a direct method on local finance managers for the accounts within treasury's control. Because of different methods and subsets of data used, reconciliation between actual and forecast and between long term and short term forecasts is almost an impossibility. Other deficiencies of the traditional approach to cash forecasting include:

<sup>4</sup> T: external bank accounts owned by treasury; H: external bank accounts owned by centrally controlled holding corporates; S: external bank accounts owned by operating corporates.



- delays in availability of data;
- inconsistency of reports;
- limited details for analysis; and
- extensive use of ever more complex spreadsheet solutions.

The result is that many treasurers question whether the investment in cash forecasting will yield useful information. Some even state that the benefit of getting it right does not always justify the cost and effort of getting it right.

Such negative opinions seem contrary to the fact that cash forecasting is consistently ranked as a top priority for corporates in general and more specifically for treasury. Furthermore, software vendors tell us they shy away from investments because they don't see a consistent demand in this area. This paradox can also be an indication that cash forecasting requires a paradigm shift which has not yet been provided by the industry. Consequently, corporates that do prioritise tend to create in-house (spreadsheet) solutions that are difficult and costly to maintain.

Since past behaviour is a good indicator of future behaviour, statistical analysis of past payables and receivables and inventory turnover is a promising data intensive / labour extensive approach to reliable cash forecasting<sup>5</sup>. The benefit of this approach is an integration of short term and long term forecasting and the ability to evaluate cash flow scenarios similar to e.g. the impact of a yield curve shift on company risk management.

#### ✓ **Control over cash flow; payment instruments and payment factory solutions**

The next step after understanding current and future cash balances will be to improve control over cash flow so that the timing of cash in and cash out is optimized.

Using efficient payment instruments is one of the options open for getting a grip on cash flow. Cheques might be the preferred or traditional instrument in some markets, but these require a higher cash buffer and typically incur more cost in terms of bank charges, postal float and physical security as compared to an electronic funds transfer. The promotion of more efficient payment instruments like electronic funds transfer and direct debit might require an upfront investment, but in the long run gives corporates greater control over their cash flow at lower handling cost as compared to traditional payment products.

In most corporates local finance is responsible for payment processing. For reasons of efficiency a payment process is typically run only once a week. The consequence is that actual payment terms are volatile when compared to due date with a negative impact on cash flow equivalent on average to 2 days worth of sales. A payment factory with the ability to support warehousing and the central release of transactions can reduce volatility and improve the consistency of cash flow of buyers without violating the service level agreements made with individual suppliers.

The implementation of a payment factory in combination with a bank style inter-company current account structure (also labeled as in-house banking) can create even more benefits. First of all, the use of internal accounts automates and standardises the intra-group lending and depositing of liquidity, automatically offsetting lending and deposit positions at treasury. Secondly, the routing of transactions internally reduces the cash flow processed by external banks and allows for further centralisation of external liquidity in a few locations. Transaction routing also centralises currency conversions and nets currency positions. This implies that a company requires less liquidity to run its business. Overdraft headroom can be freed up and the number of bank accounts held reduced.

### **2.3.2 Lever 4: Substitution**

Substitution is a working capital management strategy whereby one asset or liability class is replaced or offset by another. It creates value as a result of improved financial ratios and/or marginal savings due to the arbitrage of funding cost.

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<sup>5</sup> See for more detail Bas Rebel, "[A new approach to reliable cash flow forecasting](#)" on gtnnews.com (January, 2010).



### ✓ **Factoring**

Factoring is a classical substitution strategy, swapping receivables for cash or replacing more traditional forms of funding. This strategy increases access to credit when compared to a regular overdraft and potentially reduces the cost of funding. In the case of non-recourse factoring, funding costs might be higher, but the balance sheet and financial performance ratios can more than compensate for that.

Pre-paying payables at a discount or utilising pre-payment rebates are other less obvious substitution strategies. They do slow down the cash conversion cycle and impact financial ratios adversely, but they can also improve P&L performance.

### ✓ **Reverse Factoring**

Reverse factoring or vendor financing is a third type of substitution strategy that is increasingly in the spotlight of banks and large corporates. Reverse factoring is not a new phenomenon. In some countries specific local payment instruments are built on this model. RiBa in Italy and Vcom in France are good examples. The endorsement of a bill of exchange is another example of the same. Reverse factoring offers a flexible discounting scheme on the back of a promise to pay by a buyer. Depending on the scheme the discount factor can be closer to the risk margin of the buyer than that of the supplier.

Reverse factoring has captured the attention of strongly rated buyers and their banks as a means of enhancing the risk profile of credit portfolios and assisting (strategic) suppliers that have limited access to credit. The maximum benefit of reverse factoring is equal to the difference in credit margin between the buyer and supplier. Some buyers fund their reverse factoring schemes themselves and earn an additional income on the back of a trade. Others share the spoils as an incentive to strategic suppliers or as part of commercial negotiations on price and terms & conditions.

Reverse factoring is a classic example of a win-win strategy. When based on non-recourse discounting it will not only increase sales margin, but also improve the financial ratios of both trading partners by reducing DSO at the supplier end whilst potentially increasing DPO for the buyer. At the same time, the commercial finance departments of banks funding the scheme can position reverse factoring as a way of reducing risk in their credit portfolios while increasing risk adjusted income.

Pivotal to any reverse factoring scheme however is the buyer's acceptance of the payment obligation. This might be no issue for schemes operated and funded by the buyer. In the case of a third party funding the scheme, a close co-operation with the buyer and enforceable agreement in this respect is mandatory. Transparency on invoice status and prompt dispute resolution are required in order to assess the payment at due date early in the invoice cycle. Currently this messaging is not well developed and implicitly assumed based on the presentment of invoices to the scheme.

Standardisation of invoice status messaging is a prerequisite to strengthen the value proposition of reverse factoring. It will increase transparency about the status. Evidence suggests that it will also speed up dispute resolution. Transparency about the status reduces the inherent operational risk in the scheme which, under more stringent solvency regulations, allows for a better risk return ratio on the funding. Furthermore, faster dispute resolution will make reverse factoring a more attractive proposition to the supplier because it prolongs the average period of funding under the scheme.

### **2.3.3 Lever 5: Process Efficiency**

Process efficiencies resulting from standardisation, streamlining and automation contribute to working capital objectives via cost reduction and faster throughput times. The latter reduces the "inbox" of people and makes processing easier to manage, allowing for swifter issue resolution. The consequent lowering in operational cost and reduction in pipeline provide additional focus and flexibility resulting in increased efficiency in the cash conversion cycle.



✓ **Streamlining Payment Processing**

Payment processes can be automated and streamlined by integrating corporate financial systems and bank back office systems. A “fixed pipe” between corporate systems and the bank processing centres increases security and enables corporates to standardise and automate the payment release process using workflow tools rather than different bank provided electronic banking tools. The ultimate objective is to approve and release payments automatically based on invoice approval at an earlier stage. This will make obsolete a highly manual and labour intensive process, making it possible to standardise payment policies based on system rules, rather than manual intervention by local finance managers. This rules-based release of cash outflow, can significantly improve the reliability of cash forecasting.

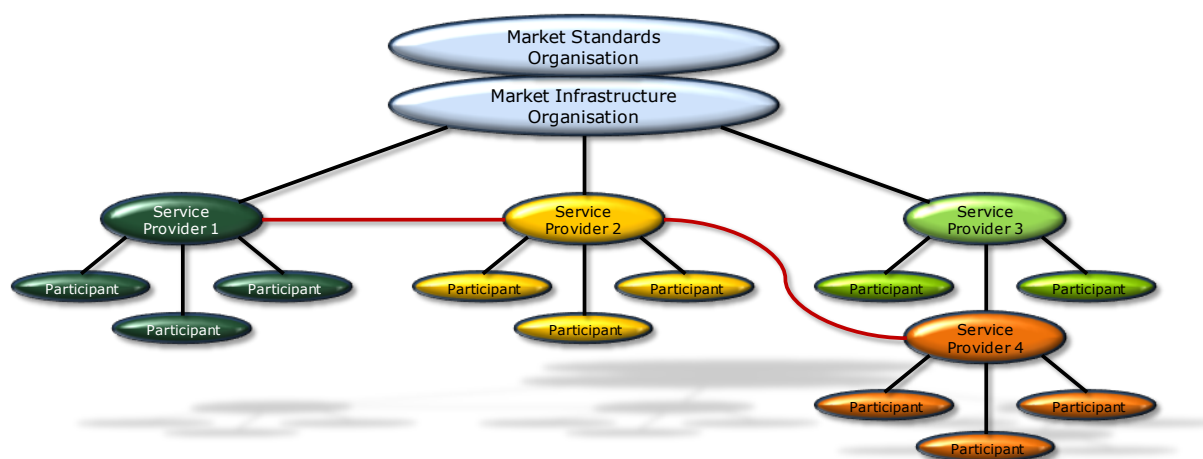
The streamlining of payment processes fits in with the implementation of payment factory solutions aimed at improved liquidity management and compliance transparency. It potentially reduces the payment process by 1 or 2 days.

✓ **e-Invoicing**

Another major improvement in working capital can be achieved by the introduction of e-invoicing. Based on random data for selected industry sectors it can be estimated that for every EUR 1 billion in revenue a company processes some 1.15 million customer invoices and a little less than 200 thousand supplier invoices. A recent study estimated that less than 10% of all invoices in Europe are currently sent electronically to customers. The same study substantiates that in Europe e-invoicing can save up to 65% in operational costs in terms of handling paper and reducing “mail float” on receivables of up to 3 days.<sup>6</sup>

Based on these findings the calculated total savings potential of e-invoicing in Europe is around EUR 11 million for every EUR 1 billion in revenue.

Despite the promising benefits there are still legal and technical challenges that stand in the way of a wide adoption of e-invoicing in different countries. Domestic e-invoicing is usually easier to manage even with more advanced requirements, but growth cross-border has been more limited owing to the differences in national regulatory frameworks.



**Figure 3: 4-corner market model with universal reach for all participants**

<sup>6</sup> A useful market analysis on e-invoicing is published by EBA and Innopay, [E-invoicing 2010](#), April 2010.



For example, there have been legal challenges relating to the differences in national legislation regarding authentication of signatures, VAT auditing, proof in court and archiving. This makes e-invoicing still a highly national practice rather than a regional, let alone global, solution. As part of the Lisbon agenda the EU has approved Directive 2006/112/EC which is now being implemented by member states. Unfortunately, different interpretations will not fully harmonise e-invoicing legislation across Europe. The EU is aiming to improve the legislation and has introduced amendments to the Directive. In short, the aim is to iron out the differences in national implementations and in effect put e-invoicing on a more even footing with paper invoicing.

The technical challenges of e-invoicing are equally big. In Europe alone there are over 300, mainly domestic, service providers. There is little standardization in services and formats across countries. In addition, few providers operate a common scheme in which customers of one can exchange e-invoices with trading partners that have selected another service provider. Because the legal framework differs from country to country, most e-invoicing schemes are targeting domestic markets only. The consequence of this fragmented solution landscape is that multinational corporates have to link to multiple solutions in order to cover their trading partner community.

To develop the market for e-invoicing demands universal reach similar to the market for mail and telecommunication. This requires an infrastructural solution based on a 4-corner network. In a 4-corner network, the relay of a message from sender to beneficiary is transparent to the two parties that are connected. They are unaware and should be indifferent about how their service providers route their request. A 4-corner model is characterised by a common protocol and an overlay infrastructure that connects all service providers directly or indirectly. In many cases, the service providers are not obliged to route their traffic through the overlay infrastructure.

Today, SWIFT provides universal reach in a 4-corner solution for interbank messaging and SEPA payment processing. SWIFT BIC and message protocols enable the financial industry to exchange transaction information efficiently within and outside the SWIFT network infrastructure. For e-invoicing, SWIFT will support the universally accepted ISO 20022 financial e-invoice standard.

#### ✓ **SMART KPIs**

Adequate KPIs and incentives for working capital would need to be SMART (Specific, Measurable, Attainable, Realistic and Time-bound) and contribute to the overall company value. In the case of working capital management, KPIs need to be aligned with the operational activities of diverse functions such as sales, production procurement and finance. They should prevent the classic situation in which a sales manager prohibits finance to call on a customer regarding overdue invoices because that would jeopardise a new even larger transaction he is working on. The KPIs and incentives for the sales manager should incorporate the payment behaviour and credit standing of his/her clients.

Given the fact that in most organisations working capital does not have a single management owner SMART KPIs for working capital need to be designed carefully. First of all, the KPIs must track the primary drivers for working capital. Secondly, the KPIs should be included in Management Reports across all of the operational processes involved. Thirdly, incentive and compensation schemes should be adjusted to the working capital management targets.

The absence of single ownership and the infancy of the profession also imply that SMART KPI reporting and dashboards are not (yet) available in standard solutions.

#### ✓ **Credit Risk Management**

The above example of the salesman putting personal goals ahead of corporate objectives highlights the need for integrating credit risk management into working capital management. One should expect that high risk business typically results in relatively higher write-offs and additional costs than lower risk business. Most corporates do credit checks on clients but unlike banks do not incorporate credit risk in their pricing calculations. Credit risk therefore is automatically a cost, rather than an opportunity that is monitored.



Corporates can benefit from banking practice by learning more about risk adjusted income and reporting.

✓ **Converging Cash & Trade**

The credit crunch of 2008 highlighted the importance of linking credit to tracking collateral. A similar need for assurance has arisen over the past years as international trade finance has shifted more and more towards open account. Converging trade document flows with cash processing improves transparency and improves the quality of information available for liquidity management and cash flow forecasting. The automation of trade information facilitates trade collateral management and reduces operational costs, notably for banks. Combined with the increased transparency in information that theoretically results in a lower operational risk, this should result in opportunities to obtain cheaper funding.

## **2.4 Conclusion on Working Capital Management**

Despite the fact that working capital management is a maturing profession still lacking a generally accepted best practice and reporting structure, managers should not delay initiating improvement projects. Managers can increase the efficiency of the cash conversion cycle potentially by 3 – 7 days which, according to the standard formula applied in section 2.1 above, equates to the unlocking of up to EUR 22 million for every EUR 1 billion in turnover.

Economising on cash trapped in working capital will be more important in the near future because credit will no longer be as freely available as in the past and, if available, only at a higher price. Basel III will force banks to adjust their income ratio for the credit risk taken in a more sophisticated manner than before. This is likely to have a notable impact on all industries and will differentiate more than ever before between strongly rated corporates and those corporates with a low rating, an implied rating only or no rating at all.

Next to improving the cash conversion cycle, focus on working capital can unlock idle cash balances outside the control of treasury leading to cost reductions in terms of process efficiency and transparency of information.



### 3 SWIFTs contribution to Corporate Working Capital Management

SWIFT provides a secure network infrastructure to the financial services industry for financial messaging and related services, including message standards and business practices. In recent years SWIFT has opened up its network and developed services targeted to non-financial organisations, including corporates. In the past decade SWIFT has approached the corporate community with a product push centred on technology, treasury and cash management. The prime message has been that SWIFT offers a single secure network solution for connecting to multiple banks.

More recently still, SWIFT has geared up its marketing messages towards a solution pull approach, focusing on the business benefits rather than the mechanics of the solutions on offer. The core message to the corporate is "cash visibility".

This chapter discusses how SWIFTs existing propositions and new initiatives in banking markets can support both directly and indirectly significant improvements in corporate working capital management.

#### 3.1 SWIFT's Core Value Proposition

From its inception in 1973 SWIFT has been dedicated to providing a highly secure network platform for the exchange of financial information and to developing and promoting messaging standards. As such, it provides the infrastructure and standards that today brings together banks, other financial institutions and their (corporate) clients and helps all of them to create efficiencies and increased transparency on financial processes.

The core value proposition of SWIFT today enables corporates to improve their working capital management. It also offers a solid foundation for potential enhancements to be made in the role that SWIFT can play in helping corporates in the future.

##### 3.1.1 SWIFT Infrastructure

For the corporate community, SWIFT provides secure access to banking partners for delivering payment instructions, exchanging confirmation messages and retrieving bank statement information.

##### ✓ Corporate to bank messaging

Bank Communication via SWIFT standardises and centralises connectivity into a single IT platform. Although this puts more responsibility on the corporate side for authorisation and bank communication, at the same time it improves transparency and compliance at a higher level. Many corporates see processes and security around local electronic banking tools as a weak spot in their compliance framework (see also figures 3 and 4).

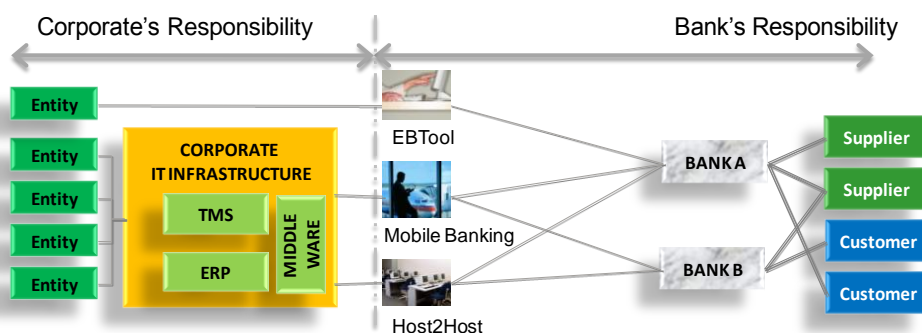
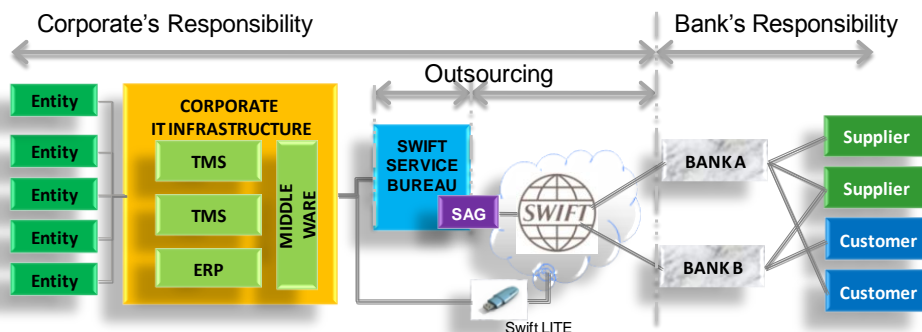


Figure 3: Responsibilities for traditional corporate to bank communication



**Figure 4: Responsibilities for Corporate to Bank Communication via SWIFT**

SWIFT-based corporate to bank communication also provides the platform to reach out to a wider banking community for multiple purposes. SWIFT can be the corporate banking hub for retrieving bank statements on behalf of operational units across the organisation while reusing these statements for gaining visibility on cash balances outside the control of central treasury.

The centralised retrieval of account information electronically can be the catalyst for improving transparency and accuracy of cash information. Standardisation and automation of bank transaction reconciliation speeds up the availability of accurate receivables positions for credit management, cash management and cash forecasting.

By the same token SWIFT-based bank communication can be the cornerstone for an integrated and automated payment factory solution, linking the corporate IT landscape across multiple banks with a single solution and at lower cost. As such the SWIFT-based payment infrastructure provides a more adaptable framework for connecting to multiple banks as compared to traditional host to host solutions. This enables corporates to distribute fee generating banking business more proportionate to their lending positions and with reduced switching costs.

SWIFT based bank communication allows for a high degree of centralisation and standardisation. It enables corporates to implement more secure communication protocols across a company. A central hub for bank communication allows for standardisation of procedures and compliance enforcement. The central hub is also easier to monitor, whereas bank communication from other locations can be restricted if not eliminated. The quality of the central communication channel to the banks can be improved because investment is no longer distributed across the enterprise. Other cost efficiencies are obtained owing to the fact that the standardisation of file formats and content allows for a higher level of automated processing of data.

As discussed in Chapter 2, this centralised, standardised approach creates higher visibility of cash balances across the group and allows for a reduction in idle balances outside the control of treasury. As indicated, it is not uncommon for idle balances to represent half of all cash reported at period end. Furthermore, the centralisation of bank communication supports the implementation of a cost efficient payment factory and in-house banking solutions which can improve the cash conversion cycle by up to 2 days, unlocking up to EUR 6.6 million for every EUR 1billion in revenue.

#### ✓ **Digital signatures potentially evolving into electronic signatures**

The recent SWIFT infrastructure initiative 3SKey provides a bank independent electronic signature to clients of different banks. The 3SKey initiative allows banks to authenticate a person by a token issued by another participating bank. 3SKey can be embedded in any application even when not operating over the SWIFT network itself. 3SKey potentially reduces the need for administering separate tokens and security hardware for each electronic banking tool.

Today 3SKey is implemented for payments files delivered via any channel and will be used in France as part of the ETEBAC migration programme on both SWIFTNet FileAct and other file



transfer protocols. However, in principle there is nothing to prevent it from being developed into a digital personal ID for financial messaging in general. In that case it could well become a universally accepted electronic signature necessary to advance, for example, e-invoicing solutions as well as user authentication or re-authentication for trade finance and supply chain messaging.

### **3.1.2 SWIFT Standards**

SWIFT has been a standards organisation since its creation in 1973. Over the years it has become recognised as the standards organisation for payments and reporting. SWIFT's ultimate goal is a single standard for the financial industry. Strongly committed to ISO 20022, SWIFT acts as the ISO 20022 Registration Authority, uses the ISO 20022 modelling methodology in its standards development, and promotes the adoption of ISO20022 within the global financial community. The ISO20022 standard is also evolving beyond payments into e.g. invoicing.

ISO20022 has been a successful, more adaptive and less complex standard when compared to its predecessors like EDIFACT. Global standardisation on ISO20022 will make it easier for corporates to standardise payment processing and integrate the technical solutions of banks into the standard financial systems used within the corporate community. Standardisation of formats and content also helps companies to automate transaction reconciliation, improving the accuracy, availability and reliability of cash flow forecasting in near real time. The direct efforts of SWIFT and adaptations of SWIFT by its software partners improve the project NPV for corporates implementing a payment factory and in-house bank. On the one hand it can reduce the project cost and on the other hand it can reduce project complexity and lapse time.

Therefore, it is fair to say that the standards managed by SWIFT have made payment factory and in-house banking projects more feasible and more cost-effective for more organisations.

EBAM (Electronic Bank Account Management) is another standards initiative aimed at more transparent communication between banks and their clients. EBAM combines the use of ISO 20022 XML compliant standards with SWIFT's messaging platform, allowing banks and corporates to streamline the process of bank account management. Whilst this potentially reduces cost on the bank side, it will also provide increased transparency for corporate clients with respect to opening and closing bank accounts and maintaining bank mandates.

## **3.2 SWIFT Business Solutions**

On top of the core value proposition around infrastructure and standards, SWIFT continues to develop and implement innovative business solutions in partnership with financial and non-financial stakeholders and supporting the enhancement and extension of established business practices. These solutions can also be applied as building blocks to enhance corporate working capital management still further.

### **✓ Trade Services Utility**

The first and possibly most advanced of these initiatives is the Trade Services Utility (TSU). The TSU provides an alternative channel for documentary trade, in particular when open account terms are preferred. The TSU is a data matching and workflow engine based on ISO 20022 accredited XML messaging standards. Via the TSU, banks are able to exchange core data extracted from purchase orders, commercial invoices, transport, insurance and other trade documentation. By matching these elements in the TSU, banks are able to track events in the physical supply chain and identify trigger points for the provision of services in the financial supply chain. These services will include both pre-shipment and post-shipment financing. Banks can also address corporate processing efficiency needs, such as discrepancy management, dispute resolution and account reconciliation.

Data management represents a significant challenge in the integration of cash and trade. High among the barriers to accurate cash flow forecasting are areas relating to the trade finance function such as billing, collections and manual invoicing. It is imperative to ensure that accurate



and timely data can be taken from these trade finance processes and used in support of accurate cash flow forecasting.

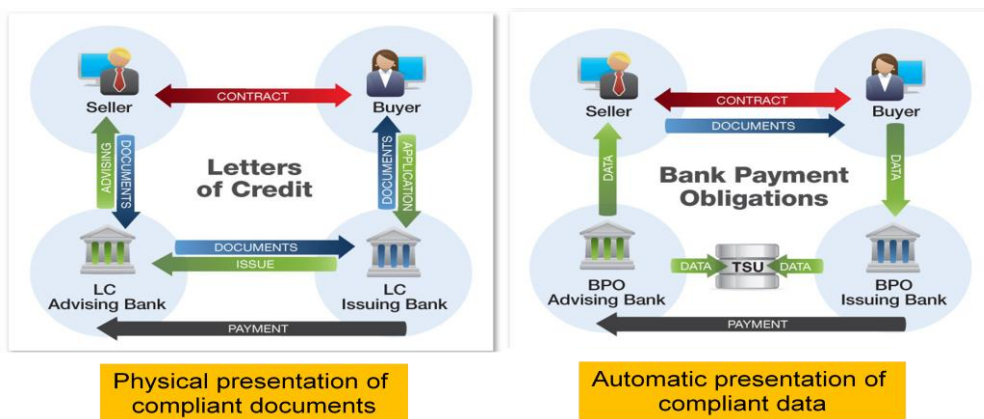
Whilst the TSU promises to be a success in its own right owing to the evolution of open account trade where cost efficient funding of the supplier remains highly trade specific, the solution components developed for the TSU, such as the matching engine and the Bank Payment Obligation (see below), can also be reused in other SWIFT solutions such as e-invoicing, triggering bank product development in the area of e.g. reverse factoring.

#### ✓ **Bank Payment Obligation**

The Trade Services Utility provides support for a new financial instrument, the Bank Payment Obligation (BPO). The BPO places an obligation on the issuing bank to pay the beneficiary bank subject to the electronic presentation of compliant data. This is comparable to the obligation of an issuing bank to pay an advising bank under a traditional letter of credit, subject to the physical presentation of documents. The key difference is that whereas the letter of credit relies upon the physical checking of complete sets of documents, the BPO can be enforced against the automated matching of selected data elements in accordance with the agreed baseline. The involved banks must agree as to what needs to be achieved in order for the BPO to come into force. Normally this will be dependent upon the matching of data. However, even in the event of a mismatch the banks can, if they wish, jointly agree to accept such a mismatch in order for the transaction to proceed unencumbered.

The commercial usage of the BPO is governed by a Service Description and Rulebook to which every participant bank must subscribe. SWIFT is currently in discussions with the International Chamber of Commerce Banking Commission with a view to obtaining endorsement of the BPO as an accepted market practice.

The recent tightening of credit conditions has highlighted a gap in the market which can be filled by the launch of a new instrument. Whilst there are a number of proprietary solutions available in the market these are generally applied in a 3-corner model only. The advantage of the TSU/BPO model is its interoperability, thus enabling banks to work together and providing extended reach in a 4-corner environment.



**Figure 5: Trade Services Utility & Bank Payment Obligation**

#### ✓ **e-Invoicing**

With an estimated 10% of 1.35 million invoice messages per EUR 1 billion revenue on-line, the worldwide market for e-Invoicing is huge and promising. SWIFT is piloting the exchange of e-invoices among a group of 12 leading invoice consolidators. Development of this market potentially saves up to 3 days "mail float" on cash collection.



As discussed in Chapter 2, market fragmentation, the incompatibility of technical solutions and the lack of universal reach are major hurdles for the wider and successful adoption of e-invoicing. SWIFT has the expertise and infrastructure to provide the 4-corner network solution required to attain universal reach.

SWIFT can eventually expand on its existing e-invoicing pilot involving 12 e-invoice providers only and allow all e-invoice providers globally to exchange invoices with one another via a central hub. Such a strategy can be the catalyst that will truly enable e-invoicing to take off. The exchange of e-invoices would become similar to the exchange of information on an international payment or SEPA transaction; the supplier providing the BIC of the relevant service provider so as to ensure that the payment is correctly routed to the beneficiary account. The 3SKey infrastructure can be used to validate the invoice signatory.

✓ **Solution evolution**

With more stringent regulation of credit and risk under Basel II and III, overcoming operational bottlenecks on reverse factoring and developing collateralised credit products seems a promising strategy for banks. As highlighted in Chapter 2, the weakest link in any regular factoring and reverse factoring scheme is still the status of the invoice.

E-invoicing in combination with ISO20022 standards for status messaging and the matching engine developed under TSU can provide the necessary assurances about the status to all parties involved. These building blocks developed and supported by SWIFT can therefore be exploited by innovative product managers of banks to create new credit products. The e-invoice status messages and matching engine allow banks to eliminate operational and credit risk from their acceptance and funding processes. When the Bank Payment Obligation is added into the equation, the reverse factoring solution can be transformed into a more open trading platform that matches the suppliers need for credit to available liquidity. The BPO can also enable e-invoice service providers to arrange for a pooled reverse factoring scheme for their buyer side clients, matching it with liquidity providers that can rely on a BPO supported by the buyer's bank.

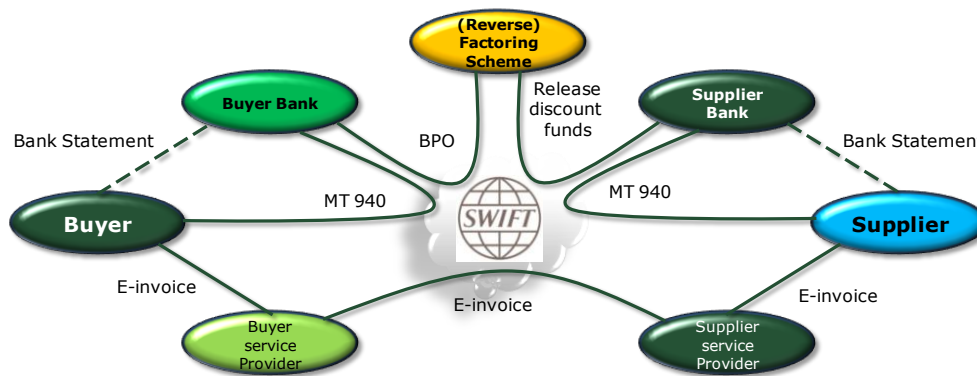


Figure 6: Possible information flow for enhanced and transparent collateralised invoice finance products

**3.3 Conclusion on SWIFTs contribution to corporate working capital management**

SWIFT has the reputation, expertise and solutions readily available to help corporates improve their working capital, so helping SWIFT members to develop products with the same objective.

SWIFT has the expertise and experience to facilitate the universal reach necessary for wider adoption and innovation in e-invoicing. SWIFT can therefore replicate in the e-invoice market the established role it has already played in other areas such as custody in the securities markets.

SWIFT can also play a leading role in driving the adoption of new market practices through the establishment of new financial instruments such as the Bank Payment Obligation. Such innovation



is entirely consistent with the ambitions of other leading industry bodies to accentuate the importance of trade finance and economic integration as engines of growth and development.

The following table summarises the value SWIFT can bring in relation to the working capital levers identified in Section 2.2 above.

<b>SWIFT</b>	<b>Transparency</b>	<b>Substitution</b>	<b>Process Efficiency</b>
<b>Messaging Infrastructure</b>	Standardised network solution supporting universal reach Cash visibility across multiple banks, aiding transparency & compliance	n/a	Security Reliability  Replacement of multiple proprietary electronic banking solutions
<b>Standards</b>	Global Standardisation supporting universal reach	Supports universal market adoption of new payment and credit products	Data integration STP
<b>3SKey</b>	Enhanced audit trail on approval processes	n/a	Reduces need for separate tokens  Potential standard for digital ID
<b>Trade Services Utility</b>	Supports the management of data related to the convergence of cash & collateral	Matching engine to support innovative bank product development, with/without BPO	Automatic reconciliation of document information to trigger funding and payment processing
<b>Bank Payment Obligation</b>	Risk mitigation tool	Alternative form of payment guarantee & collateral for supply chain finance	Automatic trigger in funding process that can reduce credit risk for banks and their clients
<b>E-invoicing</b>	Instant availability of invoice date to trading partners  Universal reach will widen acceptance	Supports product development in collateralised credit	Elimination of mail float from invoice process  Data integration (reconciliation & cash forecasting)



## 4 Call to action

A report like this does not generate benefits all by itself. At most it highlights the opportunities and creates the spark that converts thoughts into actions. This chapter however captures some of the projects and activities that corporates, banks and SWIFT can consider as a means of harvesting the opportunities described above.

### 4.1 What Corporates can do

Each organisation is unique and needs to assess its current working capital performance before prioritising and launching improvement initiatives. However, the following roadmap will be of generic value to a wide range of corporates:

1. Create a clear executive mandate for a dedicated working capital manager

Working capital crosses multiple disciplines. A concerted effort needs to be made to obtain a clear mandate for resolving conflicting interests. Without this, most initiatives will stand little chance of yielding significant benefit. The downside of appointing a project team is that this signals a temporal effort only. Better to create a permanent office mandated by executive management to improve working capital performance across operational disciplines.

2. Quantify the potential for working capital enhancement and analyze the drivers

Understanding the impact and drivers will help to prioritise opportunities and identify the foundations for realistic KPIs and incentives.

3. Educate all staff involved

Education creates awareness. It can help to create a cash focused company culture and will promote best practice initiatives.

4. Define SMART KPIs

KPIs and incentives should track key drivers and provide realistic targets for management. They should be set such that they promote alignment across business functions rather than isolated actions creating suboptimal results. As argued in Chapter 2, traditional working capital ratios are not the best KPIs for working capital. However, most financial systems deployed by corporates do record data that can be used for working capital dashboard reports.

5. Improve control over cash

As suggested in Chapter 2, creating visibility on cash is a quick win for most corporates. Instant consolidation of cash balances across the organisation and a detailed understanding of the cash flows processed on all accounts provides depth to the discussion between treasury and subsidiaries about the most efficient use of liquidity generated. It also enables corporates to limit idle cash balances on accounts outside central cash pool structures.

6. Implement reliable cash flow forecasting

Reliable cash flow forecasting is not only important to manage liquidity at central level it can also be used as an early warning signal for change and facilitate forward looking discussions with stakeholders like the investor community and banks.

7. Explore e-invoicing

Despite the legal and technical issues still outstanding, e-invoicing can create substantial benefits to all corporates. It can change dispute management processes and more generally the interaction with trading partners. Piloting and limited roll out of e-invoicing might not create the cost benefit in absolute terms but will bring experience to the



organisation. It will help organisations understand how to adapt their processes and what true changes to the cash conversion cycle can be achieved. This prepares the organisation to harvest the benefits as soon as the industry solutions are readily available.

#### 8. Leverage new technologies across the cash and trade functions

With increasing volumes of trade being done on open account, corporates trading cross border must take on more of the burden of checking documents, such as the matching of purchase orders with invoices, etc. Centralising trade finance processes provides greater visibility into the terms of trade, resulting in more control over incoming and outgoing payments. Early intervention at the contract negotiation phase raises awareness of working capital requirements and can influence payment terms. By leveraging the Trade Service Utility buyers might help their suppliers to maintain access to trade based funding, strengthening their relationships.

## 4.2 What Banks can do

Banks are aware that their clients, especially their larger clients, have to face a multi-bank reality. Increasingly, corporates realise that sound financial management requires a back up for their prime cash management bank. Furthermore, credit needs compel larger organisations to distribute their fee earning business like cash management across more banks.

#### 1. Adapt to the multi-banking world

Banks can no longer rely on their electronic banking tools as a differentiator, since their clients would prefer to use a generic technical infrastructure to connect to all of their banks.

#### 2. Take advantage of SWIFT

The development of cash management and treasury services on top of a network infrastructure like SWIFT will in the long run deliver product management economies.

#### 3. Explore e-invoicing

Banks can also explore the development of new credit products based on e-invoicing. Depending on the messaging status and the jurisdiction of transactions, standardised e-invoice messages could be used as collateral for alternative funding structures and more efficient factoring solutions. In Chapters 2 and 3, the example of reverse factoring is used to demonstrate the point that product development can increase the risk adjusted income of banks.

#### 4. Take advantage of the convergence between cash and trade

Cash management and trade finance are converging in the financial sector because they both support a bank's customer relationship management strategy, a key competitive differentiator in the current economic climate. The provision of trade finance products and services also adds tangible support to the customer relationship strategy of a bank. Trade finance is typically a short-term, low risk funding exercise. It is purely transactional, since it is founded on the movement of physical goods, easily traceable and visible, especially with new technologies, such as Radio Frequency IDentification (RFID).

It is the responsibility of the banks to manage data from trade finance transactions and integrate it with cash management or cash flow forecasting systems. Banks have the ability to make corporates more aware of the effect poor information flows from trade finance can have on cash management and consequently the huge impact it can have on the availability of working capital.



### 4.3 What SWIFT can do

As discussed above, SWIFT is well positioned to expand its value proposition towards corporates.

1. Extend standardised messaging

Exchange of information is a universal demand. Standardisation is a prerequisite for successful interaction and propagation of proprietary capabilities. This holds true for language, international telecoms and the internet. It is equally true regarding SWIFT's role as the global custodian of common standards and infrastructure for financial messaging.

Financial markets have opened up and prospered because they know that banks can rely on the messaging infrastructure developed and serviced by SWIFT. Financial institutions have understood that messaging services have never been key differentiators. On the contrary, the existence of a shared infrastructure for standards and messaging has been the catalyst that has enabled them to reach out to more counterparties whilst at the same time allowing them to focus on their core business.

Corporate clients will also learn to rely on SWIFT for communication with their banking partners in a unified and consistent way across multiple banking relationships. SWIFT can not only continue to deliver its well established messaging services but can also expand and extend the range of services on offer to support the global adoption of ISO accredited XML messaging.

2. Build upon the market potential of e-invoicing

The market for e-invoicing requires a network solution similar to the market for (international) financial messaging four decades ago. SWIFT has the expertise, capabilities and reputation to act as the standards and overlay organisation necessary to create the universal reach required for e-invoicing to take off globally.

SWIFT members will eventually be able to leverage the complementary business solutions developed by SWIFT, like the building blocks of the TSU and BPO to develop and improve more robust credit products.

3. Enhance supply chain solutions

Supply chain finance represents the most prominent example of open account services directly linked to the merger between cash and trade. With capital markets drying up and bond markets virtually disappearing, there is increased focus on how to finance trade on open account. SWIFT's portfolio of supply chain solutions will better enable banks to develop and deliver services of real value to the corporate market in support of open account transactions.

4. Support process efficiencies

The management of trade receivables and liabilities remains a difficult process for any company as demonstrated by the risk of delayed payment, the cost of financing, restrictions on credit, the operational cost of collection and reconciliation and inventory turnover. Corporates can take advantage of the combined strengths of the Trade Services Utility and Bank Payment Obligation to address many of these issues, achieving significant advantages in terms of reduced interest cost and enhanced liquidity.

5. Establish the Bank Payment Obligation as an accepted market practice

For the Bank Payment Obligation to obtain universal adoption requires an official recognition at industry level. The letter of credit, which has provided the backbone for international trade finance for hundreds of years is governed by a set of rules (the Uniform Customs & Practice) that has been established by the International Chamber of Commerce Banking Commission (ICC-BC). SWIFT can work together with the ICC-BC and others to bring a similar level of recognition and acceptance of the BPO through official endorsement and usage.



## Glossary

Item	Definition
BPO	Bank Payment Obligation, a new financial instrument relying on the electronic matching of key transaction data elements
CCC	Cash Conversion cycle = DIO + DPO + DSO
DIO	Days Inventory Outstanding = average of prior year end inventory and year end inventory divided by revenue times 365
DPO	Days Payables Outstanding = average of prior year end payables and year end payables divided by revenue times 365
DSO	Days Sales Outstanding = average of prior year end receivables and year end receivables divided by revenue times 365
EBAM	Electronic Bank Account Management, a process designed to automate the opening, maintenance and closing of bank accounts
ETEBAC	Echange Télématique Entre Banques et Clients; French protocol enabling the exchange of financial information like payment orders & account statements.
FileAct	A SWIFT interface that enables the secure exchange of batches of structured financial messages, large reports, images, etc.
FIN	SWIFT's standard financial messaging service
Financial Supply Chain	Operational processes related to the product flow from supplier to customer, including purchasing, production warehousing and logistics
KPI	Key Performance Indicator, used to measure performance and evaluate success against defined goals
NPV	Net Present Value, an economic standard method for the current value of future cash flow.
Physical Supply Chain	Operational processes related to the management of cash as collected from customers, and disbursed to suppliers and other beneficiaries, including receivables management, cash and FX management, payment processing and financial reporting.
RiBa	Ricevuta Bancaria: Italian domestic payment instrument. Irrevocable deferred electronic payment order with a tenor of up to 30 days. Can be presented by the beneficiary to the bank for discounting.
SCORE	The Standardised Corporate Environment is based on a closed user group, administered by SWIFT, where corporates can interact with financial institutions.
SEPA	Single European Payment Area; an initiative completed in 2009 to standardize formats and processing of payment and direct debit transactions in Europe at cost levels equivalent to domestic transactions.
SMART	Acronym used for defining sensible indicators to track processes and incentivise people responsible for and/or involved in business processes. It stands for Specific, Measurable, Attainable, Realistic and Time-bound. KPIs that comply with these criteria are typically better lived by and will help companies to achieve the objectives set.
SWIFT	Society for Worldwide Interbank Financial Telecommunication, a member-owned cooperative through which the financial world conducts its business operations with speed, certainty and confidence. More than 9,000 banking organisations, securities institutions and corporate customers in 209 countries use SWIFT to exchange millions of standardised financial messages.
SWIFT BIC	Identifier Code of participants on the SWIFT network consisting of 8 or 11 characters.
SWIFT Service Bureau	Third party service operator to whom the day to day operation of SWIFT connectivity may be outsourced. The service bureau operates the connection to SWIFTNet and possibly the SWIFT interface itself on the customer's behalf.
TSU	Trade Services Utility, a data matching and workflow engine managed by SWIFT



Item	Definition
Vcom	French local payment instrument. An irrevocable deferred electronic payment order (for settlement within a period of up to 120 days of issuance), accompanied by commercial data (invoice details) which the remitters bank forwards to the beneficiary when issued; there are two types: discountable and non-discountable. In the former case, creditors can obtain immediate value (less interest charges) by discounting the payment with the bank on which the transfer is issued.
XML	Extensible Markup Language is a set of rules for encoding documents in machine-readable form.