

Payment Opportunities From B2B E-commerce

One of the most frequently asked questions in the B2B e-commerce arena is a fairly simple one: "What do we do about payments?" However, the usual answer – "nothing" – often comes as a surprise, even to experienced industry insiders. Factually, today most payments for B2B transactions get made exactly as they used to before e-commerce came along – The seller sends an invoice, and in time the buyer sends a cheque (or perhaps its electronic equivalent, an EFT payment) to settle the invoice, just as in a non B2B e-commerce environment. Estimates are that at least 90% of e-commerce transactions today get settled in just that way, and an equally traditional payment mechanism also predating e-commerce, the credit card, usually masquerading under the slightly more up-to-date title of purchasing card, settles most of the remaining 10%.

But it would be wrong to assume from the current relative unimportance of payments in B2B e-commerce that payments will never be important: quite the contrary. Today payments are relatively unimportant simply because they work relatively better than the rest of the B2B e-commerce environment. Simply put, if a B2B solution provider wants to distinguish themselves from the competition today, then there are other easier ways to do so than via payments capabilities, for example the provision of sourcing services or spend category specific software modules. But as B2B e-commerce grows more mature, differentiation among providers on basic services will become more difficult, and the provision of value added services such as payments more important, perhaps important enough to become a core part of the service offering required from B2B vendors. Indeed, there are signs – for example, the recent agreement between Ariba and ABN/Amro that the more forward thinking plays are already beginning to position themselves in this space.

The problem in answering the question of payments opportunities in a B2B e-commerce environment beyond the level of the "do nothing answer" is however complex, especially for banks and B2B marketplaces or trading hubs. The complexity comes about because there are actually several ways that a "non-traditional" approach to payments could add significant value to buyers, sellers, and operators of B2B e-commerce systems. However, each of these methods implies different infrastructure, and requires selling the solution to a different group of potential customers. Over time, it is highly likely that one or two of these methods will achieve dominance, but there are few early signs available as to which ones. This leaves potential providers in the classic "innovator's dilemma" – whether to improve current mechanisms incrementally, or whether to do something bold.

Corporate Segmentation				
	SME	Medium	Large Local	Large Multinational
Cash Management Needs	* Single account	* Few accounts	* Accounts by business division * Pooling/sweeping	* Global cash management * Global pool/sweep
Buyer				
Value added e.g. Forex	-	Simple	Integration with market trading	Complex Forex integration with market trading
E-Trade Services	-	Simple	Complex	Complex
Credit Intermediation	C	C	X	X
Liabilities/Receivables Management	-	C	In-house	In-house
Reconciliations	Manual	Manual	Automated	Automated
Cash Management	-	Multi Account	Multi Currency	Multi Currency
Payments	Manual	Key-In	Automated	Automated
Transaction Information	Manual	GL	GL/ERP	Multi-ERP/GL

Exhibit 1. Payments customer segmentation

And the customers want.....what?

One of the complexities of the payments world is that different kinds of customers have very different needs. Simplistically, customers want some combination of low cost, control (so that they, rather than the organizations they deal with, define the nature and timing of payments) and richness of information, so making it easier to perform reconciliation, generate audit trails, etc. Traditionally, banks have addressed the payments needs of their customers primarily via the traditional cheque and credit card offerings at the low end, and cash management systems at the high end. Cash management systems began as relatively simply as terminals into bank systems that allowed electronic payments to be made, and rudimentary account management to be done. Over time however, these cash management systems have evolved into highly sophisticated products in their own right, offering features such as foreign exchange, access to capital markets, etc. Banks traditionally look at business customers for payments services as comprising four broad bands (see Exhibit 1):

- **Small business**, the simplest customer group. Usually, small businesses utilize very simple payment systems, usually only a single cheque account, and perhaps a simple corporate credit card. Usually they don't utilize cash management systems, although recently some banks have been attempting to offer simplified capabilities along these lines, often based on consumer internet banking systems, rather than full corporate packages. In this segment, because the customer needs are relatively simple and low technology, adding B2B payments capabilities into the mix would be relatively simple, but it would also have relatively low value to the customer.

- **Medium sized organizations** are the next step up the value chain. Typically medium sized organizations utilize more than one account – for example, a current account and a lock-box account – and utilize at least some foreign exchange services. Often these organizations utilize entry-level cash management systems. Often it's also at this level that "value-added" parts of the payment service become important, especially access to information in electronic form. For example, the ability to reconcile an electronic record of transactions on the organization's account against the organization's books is often the first request. Typically, the larger of these organizations also require direct interface from their accounting or ERP systems to the cash management system, allowing payments to be processed automatically. For B2B payment solution providers, these interfaces are somewhat problematic, as any B2B payment solution will have to work in harmony with the existing payment systems (Exhibit 2).
- **Large local organizations** are generally distinguished by having multiple divisions, each of which typically has its own set of accounts. Here, in addition to the features required by medium sized enterprises, the ability to effectively manage multiple accounts becomes crucial. For example, polling and sweeping facilities, which move money into a single high interest account overnight, are widely available. At this level, the cash management systems are almost inevitably interfaced directly to ERP or account systems – in many cases, multiple systems per company.
- **Multinationals** are the last generally accepted category. They are distinguished by the need to perform cash management across multiple accounts and currencies and are often highly active in the capital markets. In addition, they often operate multiple ERP systems

Perhaps the easiest way to address the problem is to view payment services in the B2B arena as being composed of two distinct sets of service offerings:

- Firstly, there is the provision of the basic payment and settlement services. That is, the basic function of actually moving money from the buyer's account to the seller's account. An example of this is, at the simplest level, the provision of the current account and chequebook required to make a cheque payment.
- Secondly, there are what may be termed value added services. These are anything that enhances the basic payment and settlement service to add value to the buyer, the seller or (potentially) third parties such as the B2B e-commerce infrastructure provider.

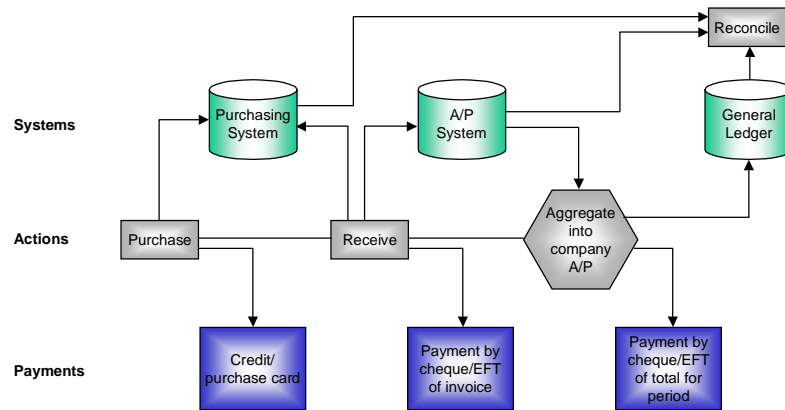


Exhibit 2. Payment systems interfaces

Basics - Making a payment

At the most basic level, payments can be characterized by what the mechanism is, and when in the transaction cycle (and by who) a decision to pay gets made. Viewed this way, there are only really five basic ways that a payment can be made, three traditional and two new, e-commerce payment methods. The three traditional payment methods are:

1. **Cheque**, the most traditional form of payment other than cash. With cheque payments, the buyer takes the decision to pay (by writing the cheque), usually once the goods and an invoice have arrived.
2. **Electronic Funds Transfer (EFT)**. EFT payments are, for the purposed of e-commerce, simply an electronic version of a cheque. Again, the buyer takes the decision to pay (usually by entering the payment data into a bank-supplied cash management system), once the goods and an invoice have arrived. In larger companies, the cash management system is often linked to an accounts payable (A/P) or ERP system, so that account details don't need to be retyped. Occasionally, the timing of the payment will also be set by the accounts payable system or a treasury management system, so as to optimise cash flow. However, EFT payments is essence remain simple electronic cheques.
3. **Purchasing Card**. Purchasing cards, the corporate world's version of credit cards (they differ only in often actually being debit cards, sometimes being limited to operation with a small group of approved vendors and having more sophisticated information reporting capabilities that their retail cousins) are currently the only payment mechanism directly supported by today's e-commerce systems. Credit card payments differ fundamentally from cheque or EFT payments in that they are initiated by the seller as soon as the goods are shipped, rather than by the buyer. For large organizations or large value payments, this is a disadvantage, taking control away from the buyer.

Both “non-traditional” payments mechanisms are not strictly “e-commerce only” solutions, they could in principle exist regardless of the use of e-commerce systems. However, e-commerce has had the effect of making them practically applicable outside of niche markets. The two mechanisms are:

4. **Hub generated EFT payments.** Hub generated payments are effectively hybrids of the EFT payments and purchasing cards discussed above. They could function by the B2B hub generating an EFT payment (exactly the same EFT payment that the buyer generated above) as the result of an e-commerce transaction flowing across the B2B infrastructure. That B2B infrastructure could actually be either a so-called hub, or a B2B network. The distinction between B2B hubs and networks is subtle, but important; many hubs can potentially reside on a single network.

For example, in the case of Ariba, one of the “big two” e-commerce system providers, there is one Ariba network, but many marketplaces or hubs can reside on it. Hub generated EFT payments have two key sets of potential advantages over the traditional payment mechanisms:

- Firstly, compared to credit card transactions, EFT payments are more efficient than credit card payments. The credit card networks are optimised for an environment of “any card anywhere in the world” and for use where purchases are small enough that a credit relationship per card can cover all potential purchases. This makes the credit card networks slow, and risky for very large transactions.
- Secondly, compared to buyer generated EFT payments, hub generated EFT payments can be made more convenient, and also can be triggered on a wider variety of potential transaction events, anywhere from the seller shipping the goods (as for credit cards) through to the buyer deciding to pay (as for buyer generated EFT payments), or an intermediate point, for example a shipper reporting that it has delivered the goods.

Hubs and B2B networks attempting to move towards the hub generated payments model should however do so with care; many (but not all) potential implementations of hub generated payments bring with them significant credit and operational risk, both of which require skilled management if profit margins are to be maintained.

5. **Invoice netting schemes.** Finally, payment can also be achieved indirectly, by invoice netting. Invoice netting is a process by which the various invoices between a group a trading partners are added together over a period of time, and each participant then pays only the sum of invoices in or out to their trading partners. This reduces the number of payments to be made to one for each participant, and also reduces the cash needs and thus the finance costs of all participants. Each invoice netting transaction effectively substitutes for a single payment in the more traditional

structures, and can also be generated from the buyer deciding to pay, or via a B2B hub at various potential points in the overall transaction as discussed for hub generated payments.

Opportunities for Value added services

In addition to the provision of the basic payment and settlement service, a variety of value added services could be provided as “add-ons” to the basic service. While in principle some of these could be provided independent of providing the basic service, in practice issues of access to data and relationship efficiency suggest that they are likely to be provided to the same organizations that provide the basic service. It is likely that a similar situation to the traditional bank payments market will arise, where basic payment services are provided at near cost, and value added services such as cash management and foreign exchange services provide the “real money”. Potential value added services include:

- **Reconciliation.** Most e-commerce systems require some variant of what is known as a “three-way match”. Effectively, this three-way match reconciles a purchase order (as sent by the buying organization) to an invoice (as sent by the selling organization) to a goods receipt before payment. Post payment, the results of this three-way match must then be reconciled to some record of an actual payment for the goods. Reconciliation as a value added service really just involves the provider of the basic payment services providing the appropriate data to the systems of the buyers and sellers. As such it is applicable to any of the basic payment mechanisms discussed above. Currently several combinations of software vendors and credit card providers offer this service for purchasing cards, for example American Express and Ariba. However, there may be advantages to be gained from providing this service for EFT payments, especially as part of a hub generated EFT payment mechanism, due to the availability of more complete information to reconcile against.
- **Credit rating services.** Regardless of the method of payment used, there may be opportunities for the provision of on-line credit rating services. These could be used by sellers either to turn down suspect transactions, or, more likely, to select the method of payment. For example, suspect buyers might be limited to only purchasing card transactions, while trusted buyers could use “open account” methods.
- **Credit provision.** When any e-commerce transaction occurs, a debtor/creditor relationship comes into existence between the buyer and seller. Clearly it is possible for an intermediary to take over this relationship, offering the seller assured payment and the buyer credit. Indeed, this is exactly part of the function of the purchasing card. However, there is in principle no reason why the provision of credit cannot be extended to the other basic payment mechanisms. In this regard, invoice netting provides a particularly interesting opportunity. This is because, as with all netting systems, the

reduction in cash required and finance costs come allied to a rise in credit risk. Thus, the presence of a specialized credit granting organization may well offer significant benefits to all parties. While this credit intermediation role is very close that the role played by a bank, in most legal jurisdictions it would not be necessary for the credit intermediary to actually be a bank, as the credit intermediary would not be a "deposit taking institution". Not being a bank is highly desirable, as it would allow the credit intermediary to operate at lower cost than banks, due to its relative freedom from regulatory overview.

- **Bill presentment.** Bill presentment, or electronic invoicing, services can also be offered. In practice, this is likely only to be useful only in EFT (either conventional or hub generated) environment. Purchasing cards do not require this service, and involve netting systems already include it.
- **Trade services.** Finally, the basic payment services could be used to provide a basis for a wide variety of what are today known a trade services. Generally trade services come into play when a potential trading partner is entirely unknown, and/or the goods shipped must be validated in some way prior to shipment.

I = Indirect
D = Direct

	Customers			
	B2B Hubs	Software Vendors	End Users	
			E-Procurement	Web-based
① Purchasing card with reconciliation information	I	I	D	-
② Provide payment services to B2B hubs	D	I	I	I
③ Cash management system linked to buy-side software	-	I	D	-
④ Bill presentment services	I	I	D	D
⑤ Trade services	I	I	D	D

Exhibit 3. Payment provider roles.

Potential payment provider roles

In combination, at least 25 possible combinations of roles in the provision of basic payment services and value added services exist. In practice, it is highly unlikely that all possible combinations will exist once the market matures, or that any single organization could be competitive in all of these combinations. Thus, banks and other potential providers of payment services must make a series of choices as to their roles. These choices will need to be made by each institution based on its overall strategy, target customers, and pre-existing payments capability (see Exhibit 3). The most likely choices are likely to be the following:

- **Purchasing card with reconciliation.** By far the easiest solution to implement, both technically and in terms of business model is to offer a purchasing card with reconciliation services; indeed many such offerings exist already. Problems with this include both its simplicity, effectively guaranteeing cutthroat competition, and its relative lack of suitability to large value transactions in environments where buyers will want control of payment release time. Note that the “simplicity” is relative to other solutions that achieve the same end; actually hooking a p-card system into an e-procurement system is a considerable undertaking. Today, p-cards are extensively used by large institutions, but because of the lack of payment release control, only for relatively small purchases. As general “any size payment” solutions, p-card solutions are likely to be more suited to the small to medium business market than any other. Despite this, the relative ease of implementation of this solution makes it likely that all serious B2B payments providers will have this service offering.
- **Payment provider to B2B hubs/networks.** In this situation, the payments provider will simply be a service provider to either individual hubs or B2B e-commerce networks. This solution is technically relatively simple for the payments provider, although not for the hub or network provider who must deal with the issues of obtaining a suitable “ok-to-pay” status signal. The problems with this from a payments provider perspective however are formidable. The payments provider has no direct contact with the end-customer – effectively the provider is dis-intermediated and the payment service turned into a commodity. This is worsened by the need to choose between being a provider to individual hubs – technically more complex, but less commoditised – versus becoming a provider to networks.
- **Cash management system linked to buy-side e-commerce systems.** Existing payments service providers that already have cash management systems on client site are likely to be able to link these systems to buy-side e-commerce systems, such as the e-procurement offerings of Ariba and Commerce One. With this solution, it is likely that “the devil will be in the details”. In practice, this solution will have to find a way both to offer more compelling customer value than the current linkages of cash management systems to ERP and A/P systems, as well as deal with the issues arising from receiving payments transaction from both ERP and A/P systems for “non e-commerce” transactions, and from an e-procurement or similar system for e-commerce transactions. The success of this approach will depend on the extent to which this can be achieved.
- **Invoice netting service.** From the perspective of existing payment providers, provision of an invoice netting service is attractive, not least because if existing players do not move into this area, new players might aggressively pursue a

market that effectively substitutes for their existing services. However, invoice netting suffers from what might be called a “reverse network effect” – for invoice netting to be effective, a large number of invoices per participant must be entering the netting system. This implies that in the invoice-netting arena, a few very large-scale players are likely to drive out all smaller players. Given that invoice netting players with international pretensions have already entered the market, most existing local B2B market players wanting to offer invoice netting services are likely to be better advised to link with the existing players, and complete by offering credit provision services, where their local knowledge can give them a competitive edge, in addition to the invoice netting scheme.

Pursuing the opportunities

Today banks hub operators and B2B solution providers face significant challenges in choosing how to best enter the B2B payments arena. Most organizations simply will not have sufficient resources to place a bet on all the available technologies. From the perspective of each of the potential players the threats and opportunity are very different:

- From the perspective of the B2B hub operators it is likely that, at least in the short term, that they will be better off acting as “fast followers”, rather than aggressively pursuing any of the non-traditional payments options. Where possible, their best bet will be to simply follow whichever payments path their technology suppliers follow, unless their customer base has very specific requirements not met by the “plain vanilla” technology. In the longer term, it is likely that hub operator’s best interests are likely to be served by seeking interoperability with providers of invoice netting schemes. This will provide maximum independence from banks that at some point are highly likely to become competitors in the transaction processing field.
- From the perspective of B2B technology providers, the choices are less clear-cut. In the short term, their interests are likely to be best served by simply pushing towards standards for interfaces to payments systems, given the wide variety of international standards for connection. In the longer term however, this reduces their ability to use payments as a source of competitive advantage.
- Finally, for the banks, the situation is actually relatively simple. Any solution that involves either B2B hubs or B2B networks generating payments will reduce their hold on their current customer base, potentially placing them in a highly unfavourable situation. Thus, they should aggressively pursue the option of interfacing their current cash management systems to B2B buy-side software, and only providing payments services to B2B hubs and networks where this does not threaten their middle to large corporate cash management system market, which is core to their current customer relationships.

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