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B2B Exchanges: A Lesson from the Past To Guide the Future

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Many opinions have been put forward concerning the value, future and viability of B2B exchanges during the past few years. In many ways, these opinions have reflected the roller coaster ride of emotions concerning the revolutionary potential of the Internet and information technology, as well as the unbridled economic and financial enthusiasms of the day. A scant few years ago, exchanges were seen as the next big thing and the companies providing the technology for such exchanges truly had a tiger by the tail. Things have clearly changed since those halcyon days.

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Many opinions have been put forward concerning the value, future and viability of B2B exchanges during the past few years. In many ways, these opinions have reflected the roller coaster ride of emotions concerning the revolutionary potential of the Internet and information technology, as well as the unbridled economic and financial enthusiasms of the day. A scant few years ago, exchanges were seen as the next big thing and the companies providing the technology for such exchanges – like Commerce One, i2 Technologies, Ariba and Peregrine Systems, among others – truly had a tiger by the tail.

Things have clearly changed since those halcyon days. Not only has the enthusiasm for all things Internet dampened considerably, but the prognosis for B2B exchanges has taken a nosedive as well. The stocks of the leading B2B exchange technology providers have plummeted to near de-listing status in the past two years, from heady nosebleed highs that helped fuel the mindset that B2B exchanges were indeed a can't miss opportunity.

Now, of course, the plummeting stock prices and values of the B2B exchange technology vendors are producing a much more negative prognosis, with the entire concept being discredited and tossed into the heap of historical ephemera.

That loud sound you just heard was the baby landing as it was tossed out with the bath water. While we believe that the plethora of B2B exchanges will continue to shrink in number, we also believe there is substantial evidence that the overall demise of the value of such networks has been greatly exaggerated.

The Value of B2B Exchanges

The operative value of a B2B exchange is in its ability to move goods or services in a more efficient manner. The seller wishes to move excess inventory, thereby decreasing carrying costs. This improved efficiency allows the supplier of goods or services to soften the blow of changing markets, maximize revenues – even at discount prices – and respond to market demands in what many hope will become a “just in time” production/delivery schedule. The B2B marketplace also affords the seller the opportunity to expand the geographical range of its market, thereby hurdling temporary or sustained surpluses in a local market.

Similar benefits are accrued by the purchaser of goods or services on a B2B exchange. Needed goods or services can be sought from a much broader geographic area, and competitive pricing pressures, including discounts, can offer cost savings not available in a regional or local market. The buyer is also in a position to wait until the last possible moment before committing resources to the purchase of goods or services. They too, can be freed from the costs of carrying excess material or people during off-peak periods.

The Ultimate Exchange

There are many examples of B2B exchanges that have been up and running profitably long before the “B2B exchange” concept was coined and gained so much public enthusiasm. EDI networks have been in place for years, their main drawback being the costs associated with participating and the varied infrastructures on which they operated. Indeed, the technical standards advanced by Internet-based computing were expected to alleviate much of the interoperability issues that hampered the dissemination of EDI itself.

Yet even with these limitations acknowledged, meaningful examples of the unequivocal success and trenchancy of B2B exchanges abound. We believe one of the most notable examples, and one that offers the most guidance for those considering participation in B2B exchange activity, comes from the U.S. electric power generation and distribution grid.

The U.S. electrical grid allows power suppliers and consumers – in the form of utilities or large industrial users – to purchase or sell electrical capacity across broad geographical areas. Kilowatts provided to a specific consumer can be generated at numerous sites and fed onto the electrical grid.

Unlike any other commodity, electricity must be delivered and used at the moment it is generated. The electrical grid has no capacity for storage or carrying capacity; the physics of the grid require truly “real-time” manufacture and consumption. There is no carrying capacity in such an environment. No other trading exchange works under such rigorous demands.

For those that would quibble with our identification of the electrical distribution network as an exchange example par excellence due to the blackouts in California earlier this year, we would argue that the exchange itself never ceased functioning. Instead, it was the financial willingness or ability of consumers to pay higher prices for electricity, and the apparent willingness of generators to withhold power in a newly (and perhaps poorly) defined deregulated marketplace.

Despite its uniqueness, the electrical grid model offers much in the way of analysis in determining requirements for a successful exchange environment. We outline these requirements as follows:

- ◆ *Commodity offerings.* Electricity is a fundamental commodity. A kilowatt is a kilowatt no matter where it is produced or consumed. While few other products can be as uniform, the relative uniformity of the items being exchanged adds to the viability of the exchange. Chemicals, petroleum, automotive parts, etc. all reach the threshold of required commoditization.
- ◆ *Multiple suppliers and consumers.* The more the better. The larger the number of participants in a given exchange, the more likely it is to represent the broader market at large. Near ubiquitous participation by suppliers and purchasers can not only smooth spikes in prices but also makes possible more accurate long-range forecasting.
- ◆ *Full and complete commitment from the participants.* Power generators and consumers in the U.S. electrical grid have no other options. They must participate and be fully invested in the exchange for their survival. From this we argue that any enterprise considering exchange participation must consider the depth of their own and trading partner commitments to the exchange. Those operated by third parties may lack this fundamental commitment and may therefore be less likely to succeed.
- ◆ *Products and services offered must meet a certain threshold of necessity.* Electrical power stands with things like food, water, and other basics of modern life. However, “necessity” can be a fluid definition given external factors. Economic downturns can affect the necessity of many commodity items, such as airplane tickets or jet fuel.
- ◆ *Geographic distribution.* As noted above, the generation and consumption of electrical power is broadly distributed. Exchanges that offer participants to expand their buying and selling opportunities over larger geographic areas reduce short-term shortages and price increases.
- ◆ *Demand modeling.* The electrical distribution grid’s history has allowed the participants to more aggressively plan and model for demand peaks and valleys. While few B2B exchanges share such longevity with the power

grid, each advancing business cycle will allow for greater accuracy in modeling future supply and demand.

- ♦ *Low latency.* While no other commodity will likely approach the zero-latency of electrical power, we believe that decreased latency times for delivery of goods will be a key element of any successful exchange.

The Sageza Group believes that most successful exchanges will meet most if not all of these criteria. Merely meeting some will not be sufficient, as we see in the following section.

What We Have Found

In our latest B2B Exchange Directory, we note more than 1,000 exchanges of various sorts and sizes still up and running as of September 2001. We also identified nearly 200 exchanges that had folded during the past two years, with a wide range of vertical market segments represented. We do not think that sheer numbers alone will be the determinant for the ultimate success of the B2B exchange concept. In fact, while the numbers we have reported indicate the concept is alive and well, we fully expect that the total number of exchanges will continue to decrease over time. This, we believe, will be largely due to consolidation, a market force that will not only be driven by economic conditions but the requirements of exchanges themselves. As we noted previously, the more inclusive an exchange is, the more stability and predictability it offers its participants.

Let's take a look at the B2B exchange verticals that gained the largest percentages of individual exchanges in the past eighteen months.

TABLE 1: New B2B Sites December 2000 – September 2001

Industry	Total Sites	New (since 12/00)	% change
Information			
Technology	13	5	+38%
Environment	10	3	+33%
Education	13	4	+31%
Human Resources	24	5	+21%
Advertising	21	4	+19%
Travel & Hospitality	22	3	+14%
Electronics	45	6	+13%
Shipping &			
Logistics	48	6	+12%
Agriculture	46	5	+11%

This first chart shows the verticals that enjoyed the greatest growth rate based on number of new B2B exchanges found during the period of December 2000 through September 2001. We believe this growth in numbers of exchanges represents a synthesis of the economy itself. In other words, during the long boom of IT, for example, many newcomers flocked to the market in an attempt to ride the IT spending boom. No doubt, as that market has slowed, many of these aspirants, and many that came before them, will be forced to either close their doors or merge with others.

While we expect to see severe consolidation on all fronts of the IT market sector, we do not believe that a mere decrease in the raw number of sites indicates a failure for B2B exchanges to deliver significant value to their participants. In fact, as we have noted above, consolidation and ubiquity of

participants may in the end deliver the economies of scale and completeness that a more fractured, multi-exchange environment could not deliver. We believe that consolidation will offer benefits to both buyers and sellers. Furthermore, the increased commoditization of IT products would assist in sustaining the remaining exchanges.

As we look at the growth of exchanges focused on human resources, education and advertising, we again expect that the next survey of B2B exchanges will show a decrease in the number of exchanges due to market conditions. It must be stated clearly that B2B exchanges offer no panacea for participating companies. In themselves, they do not offer shelter from market vagaries. Advertising, human resources, travel and hospitality, shipping and logistics, among others, all will feel the pinch associated with the economic downturn. Transactional volume will drop. For some exchanges, this will mean extinction. But for those that survive, and more importantly for the participants of the survivors, the value propositions of faster inventory reduction or lower carrying costs of supply will still be in effect.

TABLE 2: B2B Exchange Failure Rates December 2000 – September 2001

Industry	Total Sites	Total Failures	% change
Telecom	24	7	-29%
Retail	19	5	-26%
Industrial Supplies	22	5	-23%
Consumer Durables	26	6	-23%
Surplus	27	6	-22%
Printing	20	4	-20%
Auto Parts	15	3	-20%
Food & Beverage	74	11	-16%
Chemicals	49	8	-16%
Industrial/Business Equipment	48	7	-15%

This chart shows the highest percentage changes in the number of exchanges for given market sectors. Leading the pack in percentage loss is the telecom sector, which should come as no surprise. The sector itself has been consolidating and we believe that is reflected in these numbers as well. Given the relatively small number of sites (compared to things like food and beverage or chemicals, for example) such a decrease is actually rather modest given the telecom sector consolidations and contractions. Furthermore, as the various elements of the telecom sector move closer to become pure commodities (bandwidth, switches, etc.), the margins for these products will shrink. Such margin pressure will invariably squeeze out a number of participants.

Other market segments also show lesser declines. We note that things like consumer durables and retail also took significant hits. Consolidation forces like those outlined above are certainly in play here. Furthermore, shipping costs of some items – like large consumer durables – will pressure margins for those exchanges already near the precipice.

What It All Means

The Sageza Group believes that enterprises can accrue substantial benefits from participation in B2B exchanges. Whether on the open market, or with a

subset of that market in a private exchange, the following guidelines will remain in place.

- ◆ *Commodities are king.* If you are purchasing or selling commodity items there are substantial opportunities for cost savings and streamlining of inventory management. The larger the variance in a product the less effective the exchange environment will be in reducing costs.
- ◆ *Join the largest exchange possible.* The larger the number of suppliers and purchasers, the more predictable the supply and demand become. With a greater percentage of known suppliers and purchasers, price variations are smoothed. In this sense, size truly does matter.

Determine the commitment level of the other participants. Perhaps the best type of exchange to participate in is one where the participants must all be involved. Third-party exchanges should be evaluated carefully as they may not offer a complete enough marketplace and the commitment of participants may be at varying levels.