Bad Structure and the Battle for Capacity
Strategic Alternatives for Low or High Profit Wholesaling by 2020

Scott Benfield and Steve Griffith

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Wholesale distribution is, according to the authors, entering a new era where the branch centric model and value proposition is fading. The industry has the ear-markings of bad structure and current research finds that many wholesalers are destroying shareholder value. New models of distribution will emerge that leverage labor capacity and drive lower cost to the customer. Many wholesalers, however, remain unconvinced of the dynamic changes from outside the industry and they will be at a disadvantage as new models take hold.

In five years of reviewing transaction profits[i] of B2B wholesaler distributors, we have found that 40% of all transactions cover their weighted average cost of capital, 20% have a positive return but fail to cover their capital costs, and 40% of transactions have a negative profit. Investments that fail to cover their weighted average cost of capital or WACC (typically 8%) are said to destroy value.

Our research findings, launched in November of 2011[ii], were only one data point describing the predominant issue as value destruction and therefore needed additional research to corroborate or refute our observation. On March 2, 2012, in CFO Magazine, the Accounting Lab at Ga. Tech released a Wholesale Industry report on 122 publicly listed companies. Using forensic accounting, the report described the industry as having a negative free cash flow profile of -7% and was 39th of 44 industry sectors in the measure.[iii] Free cash flow is a key ingredient in shareholder value creation with the accepted formula of Value=Free Cash Flow/WACC.[iv] In their analysis, the Ga. Tech Lab discovered that nearly half of the wholesalers were borrowing to fund growth opportunities as their existing base of business was generating a negative cash flow profile. Without a positive free cash flow, the business cannot, at least for very long, fund growth and, to get growth, the firm extends the credit line. Unfortunately, this leverages the corporation and leads to debt service that further takes cash away from long-run investments.

Given that signs point to wholesale industry destroying shareholder value, the question is why? What has changed in distribution in recent years where the industry is experiencing an untenable path of long-term growth? Our observations are that there have been fundamental changes in technology that give customers power to seek greater value. Coupled with a decline in manufactured costs and better measures on value generation, the traditional branch centric and sales driven approach to value appears to be in decline. In essence, the fundamental value

proposition of wholesale distribution has migrated to a new dynamic and we believe many wholesalers will deny this observation and suffer ever decreasing profits as the decade unfolds.

The Power of E-Commerce

E-commerce capabilities have been a part of wholesale distribution for over a decade. Fledgling models began in the late 1990's and early part of the new millennia. Today, approximately half of wholesalers have a functioning e-commerce storefront[v] and the forecast is for this to increase to close to 75% of all firms by 2015. In the early stages of e-commerce, the primary gains are for the providers who secure orders at a lower cost. For wholesalers, the primary gain is in a lower labor cost as inside sellers no longer have to take the order. Our work in transaction costing finds that e-commerce offers a $2 to $3 per line cost advantage over an inside sales supported order of 2 to 3 lines per transaction. Once an industry becomes saturated with e-commerce storefronts, however, the advantage quickly moves to the customer and the price in an industry often stagnates or falls.[vi]

As e-commerce is now used in half of all wholesalers, the ability of the customer to check price and availability is unparalleled in industry history. Industry research finds that, today, 22% of wholesalers readily admit to customers checking price competitiveness online and this will increase to 44% by 2015.[vii] Our proprietary research in sales restructuring believes that the price comparison shopping is understated. In recent sales audits, we have found where upwards of 40% of all orders are price shopped via e-commerce. The ability of the internet to suppress price increases is further corroborated by the observation that many vertical markets have not recovered margin percent during the economic recovery.[viii] This observation is also made in the Ga. Tech research regarding the industry as a whole. We first noticed price shopping in distributor showrooms including lighting and plumbing where phone price comparison apps were being used by customers. Today, however, we believe the practice of accessing e-commerce to check price is ubiquitous and growing in all distribution verticals. Secondary evidence has found that contracting industries regularly purchase online from ebay and Amazon. Price shopping and suppression of pricing gains is not, however, the only change brought about by e-commerce.

As the technology of online ordering including product search is increasingly accepted, the need for sales supports decreases. In essence, e-commerce greatly increases the customer service and solicitation capacity of the wholesale firm while full inside and outside sales efforts can easily cost 50% of total operating expenses-and are, arguably, providing declining levels of value to the customer. Our work in reviewing an alternative and growing low-cost model of distribution, named Transactional Distribution, finds that many customers can be persuaded, through price reductions, to place orders via e-commerce with little to no sales support. The interesting and disquieting observation about e-commerce is that it requires only a minimal cost to increase capacity in the wholesale firm. In essence, customer ordering capacity can be can be increased, substantially, for pennies on the dollar where, currently, the cost of a full sales supported stock order averages $50 more in cost than its e-commerce equivalent.[ix]

A further problem awaits wholesalers where customers place e-commerce orders for commodity products; the sales and solicitation is largely undifferentiated. In essence, placing an order for wire, pipe, lubricants, chemicals, and other commodities through e-commerce is a

transaction that leaves little differentiation in the mind of the customer. Sales support becomes commoditized and this forces slow but unwanted adoption of a new dynamic from mangers that have, historically, placed much of their value proposition in their sales forces.

Our research points to an industry where changes wrought by e-commerce have been largely underestimated. These changes have been slow to take place as wholesalers have been slow to reduce price with reduced sales support. However, as new and lower cost models take hold, prices paid will fall as efficiencies from reduced sales support are brought to market.

Globalization of Manufacturing and Product Cost Deflation

Four years ago, we researched the propensity of wholesalers to purchase products that were named "off-brands" in that they were manufactured overseas at a significant price advantage.[x] At the time, the average landed cost advantage of "off-brands" made overseas vs. domestic brands manufactured domestically and overseas was an average landed differential of 30%. Exhibit 1 gives a review of the ranges of pricing differentials from a sample of 200 wholesaler

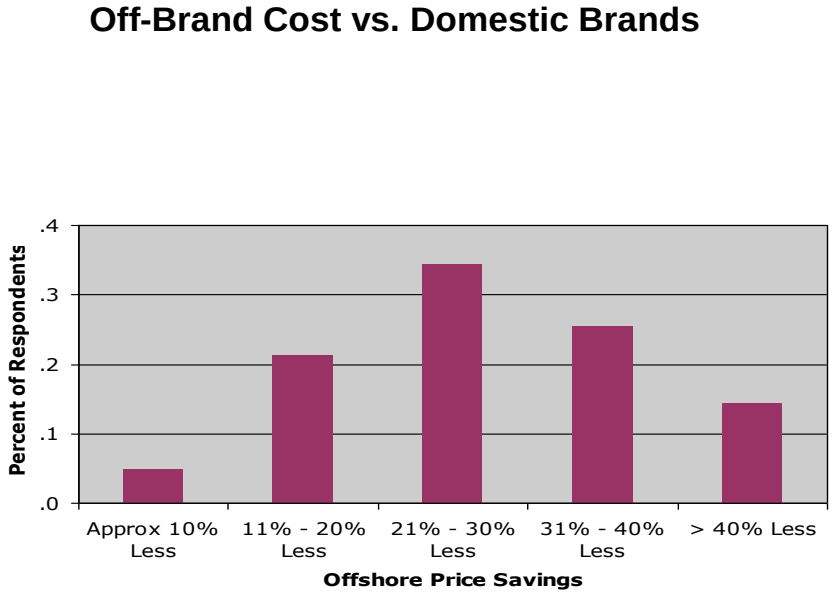

Exhibit 1

executives. Today, our continued review of off-brand products often labeled "private brands" finds that there is still a 30% landed cost differential. Furthermore, these products are becoming increasingly accepted. Recent research in the HVAC sector finds fan motors, a major commodity group, are being imported by wholesalers in container loads with some large contractors taking direct shipments of full or partial loads.

The larger concern, for wholesalers, is that "private brands" will increasingly become a part of the product mix. In a real sense, wholesalers are importing deflation[xi] for their cost of goods

and this is expected to increase as "private brands" grow. The upshot of reduced cost is that the buy side advantages will find their way to the end user marketplace as wholesalers seek competitive advantage. Additionally, there will be less margin dollars, as product cost falls, to support the existing full-service platform. These changes will take place over time but, today, we believe they are already driving a reduced cost to the customer. Many distributors underestimate the effects of product deflation and e-commerce and their cumulative downward pressure on margins. Many wholesalers are in denial of these forces and don't associate them with a negative cash flow profile and assuming debt to fund growth. The final cost decrease in distribution will come from rearranging the business model to take advantage of capacity misalignment. This will, initially, happen with only a few firms but their cumulative effect on overall structure of the industry will be significant.

The Fundamentals of Value and Transaction Economics

A metric highly correlated with value generation is Return on Invested Capital. However, for supply chain firms, ROIC does not measure the value generated by "investment" in marketing and sales entities. The field of Activity Costing attempted to allocate operating costs to customers and other marketing entities in decades past to determine their value generating ability. But these attempts were largely dismissed by wholesalers because of complexity and inaccuracy in the original models. From 2003 to 2007, in a series of papers and a book, Robert Kaplan of the Harvard Business School and inventor of Activity Costing recanted the original discipline and replaced it with Time Based ABC. Key to the new discipline was the treatment of labor capacity and away from the 100% allocation of operating expenses from the old models. Kaplan's argument was that capacity should be allocated at usage with overcapacity treated as an investment or chance for streamlining.

Our review of many of today's cost to serve models, however, finds that there is still a lack of understanding and usage of Kaplan's design parameters for cost allocations and as it relates to capacity. Our work in allocations uses transaction types with labor differentials to estimate capacity. We typically have 4-6 base transactions, across ten labor buckets, and further cost them according to outside sales assignment or not, inside sales assisted or e-commerce, and shipped or branch pick up. We call the methodology Labor Differential Transaction Costing. Typically, we have 14-22 transaction types for costing purposes (Exhibit 2) and there are substantial differences in transaction costs. Many transactions, in aggregate, don't cover their fulfillment costs including: non-stock transactions, counter (retail) transactions, and small order value stock transactions. The problem for wholesalers comes in the incongruence of the traditional reward and measurement systems (sales and margin dollars) which don't consider capacity costs and contribution to operating profit of a transaction or customer. Branch managers, sellers, and corporate management often reward their efforts on generating higher sales and margin dollars. According to our research, however, 60% of these transactions

			Transaction Type Allocations	Exhibit 2		
			A. Pewtor Territory			
			FY 2011			
Transaction Number	Transaction Type					
		Invoice Total	Line Total	Line Cost	Invoice Cost	Total Transaction Costs
1	Stock-Unassigned-Order Writer	0	0	$ 8.30	$ 43.46	$ -
2	Stock-Assigned-Order Writer	1844	3319	$ 8.30	$ 75.10	$ 166,033.76
3	Stock-Unassigned-ECommerce	0	0	$ 6.00	$ 43.46	$ -
4	Stock-Assigned-ECommerce	455	819	$ 6.00	$ 75.10	$ 39,084.50
5	Retail-Unassigned-Order Writer	0	0	$ 7.25	$ 12.98	$ -
6	Retail-Assigned-Order Writer	1233	2219	$ 7.25	$ 48.50	$ 75,891.15
7	Retail-Assigned-ECommerce	322	580	$ 5.95	$ 48.50	$ 19,065.62
8	Retail-Unassigned-ECommerce	0	0	$ 5.95	$ 12.98	$ -
9	Non-Stock-Unassigned-Order Writer	0	0	$ 15.03	$ 45.43	$ -
10	Non-Stock-Assigned-Order Writer	956	1721	$ 15.03	$ 76.46	$ 98,959.38
11	Direct-Unassigned-Order Writer	0	0	$ 3.81	$ 11.62	$ -
12	Direct-Assigned-Order Writer	288	518	$ 3.81	$ 43.37	$ 14,465.66
13	Direct-Unassigned-ECommerce	0	0	$ 2.77	$ 11.62	$ -
14	Direct-Assigned-ECommerce	56	101	$ 2.77	$ 33.37	$ 2,147.94
	Totals				Total	$ 415,648.01

destroy value in that they don't cover their weighted average cost of capital. In essence, sales and margin dollars of a transaction or a customer have no predictive value if the entity covers its fulfillment cost(s).

To understand how a transaction creates value or not, consider Transaction 2 from Exhibit 2. The Stock-Assigned-Order writer transaction is a stock order, assigned to an outside seller and processed by an inside seller. The line cost is $8.30 and the invoice cost is $75.10. If a stock order is $440 at a 22% gross margin, the order generates $97 in margin income. However, with 2 lines per order, the cost of processing is $92. The order makes $5 but has a fulfillment cost of $92 and a Transaction ROI of 5.4% ($5/$92). If the weighted average cost of capital for the wholesale firm is 8%, the order literally destroys value. Again, we find where 20% of transactions have a positive return but below the WACC and 40% of transactions have a negative return. As allocated costs are predominantly labor, the measure of Transaction ROI gives an accurate picture and whether or not labor capacity is aligned with profitable business. Based on our work from five years of Labor Differential Transaction Audits, we find that the vast majority of wholesale firms, using financial reward metrics of margin dollars or sales, destroy value almost as fast as it is created. For example, if a $100MM in sales wholesale firm has $20MM in operating expenses, our estimate would be that approx $13MM of those expenses are in labor and we would expect that 60% of those expenses or approx. $7.8MM (7.8% of sales) is spent on transactions that destroy value.

The danger for traditional full service distribution comes from new models that understand this misalignment of capacity and take advantage of it. So named Transactional Distributors target transaction types and customers that are more likely to cover their costs including large

stock orders and drop shipments. Furthermore, these firms target the stock Pareto inventory and have fewer and smaller brick and mortar locations. Finally, as transaction size in margin dollars and type of transaction is closely related to fulfillment cost, these firms have learned to drive transaction size by linking it to price reductions. The savvier firms discount price at a lesser rate than the order size increases and drive the Transaction ROI of the order even higher.

Transactional distributors, nascent a decade ago when we began monitoring them, are becoming more common. A recent incident, chronicled in an industry trade magazine, found where a sizable distributor was in jeopardy of losing a large account to a transactional distributor.[xii] We've found transactional distribution growth in dealer based industries like HVAC and Automotive Parts where dealers can take larger orders for resale. Also, MRO industries with on-site storage offer the chance to batch larger order sizes at the customer site and reduce costs. The transactional distributor also has cost advantages from using a greater mix of "private brands" and scant sales support replaced by e-commerce. In all, we find where they can reduce price by 20% to 30% over full service and branch-centric distribution and have returns on sales that are 2x to 5x greater than the traditional model.

We dub new business models that target profitable transactions to leverage labor as winning the battle for capacity. The battle is the efficient use of labor as matched to transactions which have a high probability of producing a positive Transaction ROI. We fully expect that new business models, predicated on driving the variables of transaction size in margin dollars and type of transaction to become increasingly common. They will put significant pressure on traditional firms who will find it difficult to compete. Finally, these models have additional cost savings of targeting A&B inventory (20/80), reduced brick and mortar costs, reduced sales costs, and reduced cost of goods from using "private brands." Our expectations for change, however, from traditional distribution to combat or even recognize these issues, is low. This has to do with a general, but not total, failure of traditional players to recognize outside change, engage it, and dig into the detail to understand it. In large measure, they proffer hope, bounded by experience, as a strategy and will likely destroy shareholder value because of it.

Value Migration and Bad Industry Structure

Wholesale distribution was a geographic centric organization at its start some 100 years ago. Any particular geography with substantial population was served by the branch. Over time, the branch became the nerve center and default "value" generating locus of the wholesale organization. The migration of value from the branch due to technology is depicted in Exhibit 3. Migration of value has been in areas of sales and solicitation, location utility, product knowledge, and product sourcing. Thirty years ago, sales were assured as markets were growing at GDP rates of 3.5% per year. Since the Great Recession, however, the recovery is forecasted to be in the 2% GDP growth range. Location utility, a generation ago, assured sales growth. Today, advances in shipping, more shipping and storage options, and better transfer of information has created less dependence on the local storage of inventory.

Product knowledge in the past was a branch responsibility but today, the need for product knowledge is lessened as many products are mature, their application can be researched online, or product knowledge experts can be housed at the home office and communicate real time via technologies such as Skype. Finally much of the sourcing (purchasing) and back office

functions such as accounting moved from the branch as IT became integral to their execution. Today, many customers send product specs, gathered from manufacturer sites, to their distributors for ordering.

Exhibit 3		**Migration and Change in Distributor Branch Value Added 1980-2010**
Sales Growth	Past	Assured by growth economy and rising commodity prices.
	Present and Future	Economic growth tepid and undertain. Commodity deflation from private brands.
Location Utility	Past	Product availability in local markets assured growth.
	Present and Future	Location value waned due to better internal logistics, enhanced transportation
		options (3PL, Parcel Carriers, Emergency Shippers), use of cross docking and
		drop or partial truck load shipments.
Product Knowledge	Past	Domain of the local branch and product specialists.
	Present and Future	Application knowledge greatly enhanced by manufacturer and distributors websites. Advanced
		communications using internet and wireless technology enhanches availaiblity of
		application specialists.
Prouduct Sourcing	Past	Done through local branch and purchasing or sales organization.
	Present and Future	Product research done online 24/7. Ordering done e-commerce, inside sales or e-mail.
		New and different product researched online--customer controls much of specification .

The problem with the migration of value from the branch to more centralized location(s) is that many wholesalers still operate full service branches with the exception of accounting and purchasing functions. The branch manager calls the shots on selling and pricing and the branch is replete with inside and outside sales staff. The failure to recognize excessive costs in a full service branch structure is a big part of the problem and wholesalers too often have headsets formed a generation ago when the branch centric model was more viable. The need to rethink and restructure the concept of the branch, get cost out, and become more efficient is real but we find where many wholesaler executives don't believe in the migration of value or don't fully utilize technology for efficiency of internal structure.

An efficient structure that recognizes effects of e-commerce, low cost foreign manufacturing, and transaction economics is essential to competing in today's environment. We take as evidence the destruction of value by wholesalers both from our research and that of outside entities. As if the prior research is not enough to incite action, we believe that

wholesale distribution is nearing what leading business strategists call a bad structure where the following attributes are common:

- An operator's capacity is indistinguishable between competitive firms
- Technology is increasingly less proprietary
- Technology makes it easier to add significant "chunks" of capacity
- The product(s) are undifferentiated commodities
- Buyers are price sensitive, knowledgeable, and can switch suppliers with minimal costs[xiii]

In industries with bad structures, making incremental changes to the existing business eventually results in futility as the overall model of business (industry-wide) allows for scant profits. To this end, we believe wholesalers who succeed as the coming decade transpires will need to make bold and significant changes in their businesses and move away from a poor industry structure. However, we expect a significant number won't change as they are convinced that the current profit malaise and value destruction is temporary and good times will return. They are supported by industry research that targets incremental change including subjects such as compensation, sales management, or cost to serve models without proper measurement of capacity.

We believe that the aforementioned changes from e-commerce, globalization of manufacturing and transaction economics are real and have already begun to change the profit making of the industry and upset the traditional full service business model. In essence, wholesalers will need to engage new thinking, a new approach, and a new strategy. To quote Richard Rumelt, UCLA strategy professor and author of *Good Strategy, Bad Strategy*, wholesalers who succeed "…must put aside the comfort and security of pure deduction and launch into the murkier waters of induction, analogy, judgment and insight." They will have to engage and test the "edge between the known and unknown."

Why is Change so Difficult?

With the writing so clearly on the proverbial wall, why do B2B distributors find it so difficult to change? This reluctance to change is not unique to this industry. We see it in Kodak, whose resistance to move to digital photography for fear of cannibalizing the film and photographic paper business is widely reported as the root cause of the firm's bankruptcy. Unknown to many, Kodak had numerous digital photography patents but failed to bring these technologies to market. Prevalent also were Blockbuster Video and Borders whose insistence on maintaining a network of brick and mortar locations, despite evidence of waning value versus new rivals including Netflix and Amazon. These firms convinced themselves of the invulnerability of their existing business while electronic content and centralized distribution were growing, by leaps and bounds, around them. Finally, community and national newspapers, despite growing electronic media, tried to maintain a physical product and an advertising funded model as ad revenues dropped from $48.6 Billion in 2000 to $27.5 Billion by beginning 2010. [xiv]

Dr. Clark Gilbert of Harvard explored this phenomenon in his study of the newspapers' inability and/or unwillingness to change to meet the realities of digital media distribution.[xv]

Dr. Gilbert unbundled this resistance into two components. The first he named Resource Rigidity. Resource Rigidity encompasses the reluctance to abandon resource and other commitments made in support of a prior business model despite their increasing irrelevance. This is most often manifested in the inability to come to terms with the fact that substantial investments made in the past, such as branch locations, stores, and printing presses no longer contribute to the value chain; at least in the manner they once did. For instance, the physical presence of a branch location near the customer may not count for much if the item can be delivered the next day at a substantial cost reduction.

Resource Rigidity can also encompass less tangible commitments. Previously successful ways of doing business, for example through the use of traditional field sales personnel, are hard to abandon as the culture may be sales driven. Finally, the resistance to cannibalizing a historical revenue and profit stream is a powerful force. To this logic, we simply advise that cannibalizing one's business is preferable to having the competition do it for you.

The second component of this unbundled resistance to change is Routine Rigidity. It is simply the resistance to abandoning old processes and value streams which have worked in the past. It is present in all businesses to some extent but becomes paralyzing when a firm's lack of action places it in jeopardy. When this occurs, members of the organization become reluctant to act, are increasingly risk averse, and seem frozen in old patterns of work. The immobilization is so complete that the shocks of real trauma including lenders reducing credit or bankruptcy declaration become events most likely to incite action.

The changes of globalization of manufacturing and low cost "off-brands," e-commerce and reduction of manned sales and order-taking, and advanced costing to target positive value generating transactions are new within the past five to ten years. Initially exogenous (outside) traditional distribution channels, these events will significantly affect distributors and vendors who market through them. Our expectation is that many distribution companies, similar to other industries, will rationalize these change events, fail to prosper from them, and quite possibly become their victims as they transpire in the coming decade.

Scott Benfield is a consultant for distributors and manufacturers in B2B channels. His firm, Benfield Consulting, is located in Chicago. He can be reached at (630) 428-9311 or scott@benfieldconsulting.com He has a BA/MBA from Wake Forest University and his site is www.benfieldconsulting.com.

Steve Griffith BS (Engineering), MBA, MA, and Ed.D is a faculty member at Indiana Wesleyan University and University of Maryland University College teaching graduate business courses. He specializes in organizational change and the impact of e-commerce on organizational change. He has over three decades of executive experience in Fortune rated and smaller companies and can be reached at sgriff2353@mac.com.

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[i] Transaction profits=Gross Margins-Transaction Costs. Costs are operating expenses allocated by transaction type

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