

High Noon at Universal Pipe: Sell Out Or Risk Everything? ‡

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Dave Butler chuckled when he realized that instead of grabbing a pair of socks that matched the dark suit he had selected he had reached for one of his favorite pairs that clashed. It was mid-November 2004 and his thoughts were with the upcoming meeting and not with packing for the trip early the following morning that would take him from Syracuse NY to mid-town Manhattan in New York City for a decisive meeting with the Japanese majority owners of Universal Pipe, Inc. (UPI). At stake was the continued existence of the company. As the CEO of UPI, one of the larger U.S. PVC pipe manufacturers headquartered in Mattydale near Syracuse in Upstate New York with manufacturing facilities at the same location and in Knoxville TN, the fate of the company and its employees depended on him.

Three years after 9/11 business was still reeling from the recession. Demand was sluggish and slow to recover and prices for pipe trended downward as well. On top of this UPI's Japanese owners wanted to get out. They had purchased the company in 1996 with bold expansion plans in mind. Yet nothing of that had materialized. The one acquisition in 1999 of a rival's plant in Jonestown GA turned out to be a disaster. Since 2001 UPI had reported losses year after year (Appendix 1). Butler was blunt in his assessment:

The Japanese parent company was getting fed up with us. The Japanese didn't like us Americans very much anyway. We were the only manufacturing operation they had. They did not understand manufacturing and they especially did not understand manufacturing inventory. They were a trading company. They were the 39th largest corporation in the world and were used to own inventory for five minutes. We were a tiny speck in their portfolio. The only inventory they had on their balance sheet was ours – and they rounded it to millions of dollars!

There were other reasons for the disinterest of the Japanese owners. A few months earlier, on April 1, 2004, a new billion dollar company had been formed under the name of Sojitz that combined two of UPI's owners, Nissho Iwai and its American subsidiary, and another firm called Nichimen into a giant with eight business divisions. Within this entity, UPI was practically non-existent. The merger with all its ramifications relegated any business of the size of UPI even more to the sidelines.

Explained Butler:

Eventually our Japanese owners stopped believing that we would ever be able to turn a

‡ This case was developed for class discussion rather than to illustrate effective or ineffective handling of an administrative situation. The company's name and that of the CEO are disguised, the financial data is not.

profit, and in 2003 they decided that the only way out was to sell us. They didn't understand manufacturing, they didn't understand inventory and they certainly didn't understand what our management was doing and there were some people in the U.S. that we reported to that went back to Tokyo and just said: "Give it up!" That turned out to be fairly good for us because by 2003 we were turning the company around. But they didn't believe it. They changed management. In April [2003] they made me CEO and then they said: "We are going to sell the company."

Butler learned that the intent was to follow a two-step process: First, UPI would file for bankruptcy and then private equity would buy up the company at a fraction of its book value using the company's assets as collateral (Appendix 2). He was convinced that this would be the end of UPI. Already rumors were circulating that a Chapter 11 bankruptcy filing was imminent; he knew this first-hand from customers and suppliers who had made comments or asked him outright. If UPI went bankrupt every one of the people with whom he had worked for the last eight years and for whom he felt responsible would be fired. And while the managers would find new jobs, the fate of many workers was dire given the weak economy in upstate New York that had experienced an exodus of manufacturing jobs for quite some time. He also knew that UPI's suppliers to which UPI owed amounts in the millions would suffer since bankruptcy would allow the new owners to walk out on existing obligations. To him, a leveraged buyout was an immoral proposition.

He realized that an alternative would have to be found quickly; the Japanese owners were resolved to dispose of UPI. What were his options? Butler learned from a few discreet phone calls that a direct competitor and two suppliers might be interested in acquiring the company. But at what price and how quickly? Business was sluggish. The company carried a large debt load.

Wouldn't such an acquisition be just as bad for the workers? A leveraged buyout and the invariable post-merger streamlining in all likelihood would cause layoffs like the ones UPI had implemented at the Jonestown plant albeit for different reasons.

Could he possibly buy the company? Could he do a better job than if UPI were bought by someone in the industry?

How could he come up with the requisite funds to buy UPI? He didn't have the kind of money required. He had learned from his bosses that a leveraged private equity buyout promised to pay in the neighborhood of \$3 million. He knew "the private equity sharks" as he labeled them wouldn't pay upfront, but in installments over three years as they proceeded to turn the acquired assets into cash. He was aware that the Sojitz liked certainty, so maybe he could offer less at better terms? But would a bank be willing to lend him the kind of money he would need? With all this debt on the books?

Also, such an acquisition was complex involving many steps. The site was a Superfund site, a site that had administratively been designated as a high-pollution site that required cleanup. A change in ownership would not go forward without involving the U.S. Environmental Protection Agency (EPA). Federal agencies weren't known for the speed with which they handled transactions. All sorts of appraisals and legal documents would be required that couldn't be completed without lawyers specialized in M&A and other areas of law.

Furthermore, he had never been an entrepreneur; this would be a new experience for him. And this at an age where many were thinking about retirement! If he were to try purchasing UPI should he invite his managers and workers to become shareholders as well? No, he decided, he didn't want this; they shouldn't be asked to put their savings at risk.

New questions kept popping up. Assuming that he could gain control of UPI, what should be the strategy going forward? How could he convince suppliers and customers to keep doing business with UPI given its checkered recent past and the rumor mill overheating?

The North American PVC Pipe Manufacturing Industry

Pipes have been around for a very long time as the clay pipes used by the ancient Romans found in archeological excavations showed. A wide array of industries used pipes such as agriculture, oil and gas, construction, and machinery. Pipes came in a variety of materials such as clay, concrete, metal (lead, copper, iron, steel), rubber and thermoplastic polymers derived from oil and natural gas. Given their widespread applications pipes could vary dramatically in diameters ranging from less than an inch to several feet.

PVC Resin

Polyvinyl chloride (PVC), the main material used in UPI's products, was accidentally discovered in the 19th century. In 1925 the B.F. Goodrich Company invented a method to plasticize PVC. The first PVC pipes were manufactured in Germany in 1934. The invention of the extruder in the 1940s provided the complimentary product to establish PVC's usefulness for pipes. Extrusion converted beads of resin and additives under heat and pressure into a liquid that could be shaped into the desired hollow form and then cooled. Given its chemical composition and production process PVC belonged to the family of "thermoplastic polymers." PVC made its debut in the U.S. in 1952 and quickly gained popularity. Since then numerous new applications for PVC have been created in industries ranging from oil extraction to packaged food.

PVC offered significant advantages compared to other materials.¹ It was extremely durable and hard to damage. It did not rust, rot or suffer bacterial contamination. The material had a very smooth surface which meant materials flowing through a PVC pipe were less likely to get stuck

¹ <http://www.articlesbase.com/home-improvement-articles/how-the-pvc-pipe-has-changed-the-world-420237.html> accessed 5/28/2009.

and provide a substrate for bacterial contamination. It absorbed shocks which expanded the range of applications even further. PVC, a combination of vinyl materials and plastic, was malleable and could be bent. For these reasons pipes made from PVC were ideal for the construction industry, for water systems, underground wiring, and sewer lines. Rising prices of copper, the raw material traditionally used for many types of pipes, also stimulated the use of PVC as the raw material of choice.

A disadvantage of PVC was that the chemical additives in PVC applications such as toys, clothing, curtains or upholstery had negative effects on human health when they leaked into the environment. The same happened when PVC was exposed to fire, for example PVC insulation of electric wiring in a burning building which caused PVC to emit toxic fumes (dioxin). These side effects prompted the U.S. government to issue a public health notification that alerted users to be extra careful.² Another disadvantage was that PVC did not disintegrate and when improperly discharged caused environmental pollution. In developing countries one could see fields covered with scraps of plastic bags that glittered in the sunlight.

PVC Suppliers

The suppliers of resin, the key raw material of the PVC pipe, could be split into two groups. One comprised large multinational oil and gas or chemical corporations headquartered in the U.S., Europe or Asia that were vertically integrated into resin production since PVC resin was based on ethylene which was a chemical derived from oil cracking. Some of the main resin producers included

- Chevron Phillips Chemical Company LP, one of the world's largest global producer of oil derived chemicals with 2004 sales of \$11 billion;
- Dow Plastics, a \$11 billion (2004) global subsidiary of Dow Chemical;
- Georgia Gulf, a US based global manufacturer of chemicals with net sales of \$2 billion in 2004;
- Lanxess, a European specialty chemicals company listed on the Frankfurt stock exchange with sales in 2004 around €7 billion;
- Saudi Basic Industries Corporation (SAUDIC), one of the world's largest petrochemical companies with \$18 billion revenues in 2004.

The second group of suppliers included generally smaller companies like AlphaGary that as specialists making customized PVC resins purchased the basic inputs and formulated materials to meet specific customer requirements.

²<http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/PublicHealthNotifications/ucm062182.htm> accessed 6/6/2009

PVC Pipe

By the early 2000s PVC was one of the world's most widely used thermoplastic polymers. It consumed about a third of the global chloride output and about 5% of the global oil and gas supply.³ As of 2002 40% of the global PVC resin output was used for pipes and fittings.⁴ In construction the market consisted of three applications:

1. Buried water (fresh, sewer);
2. Above ground water (plumbing), and
3. Electrical conduit/telecommunication (insulation).

In the U.S. and Canada, PVC was the dominant material used for drinking water distribution and waste water mains. In fresh water distribution PVC pipes accounted for about two thirds of the market, in sanitary sewer 75%, and in wire and cable about 60% – reflecting the material's attractive features, notably its light weight, high strength, durability and low reactivity.

The market could be segmented by users into industrial and municipal uses. The latter comprised drinking water distribution, sanitary sewer mains, storm sewer, and drainage which were the markets UPI served. Drinking water distribution as well as other uses required pipes to be pressure resistant whereas sewer systems used gravity pipes.

As of 2004 PVC claimed a dominant share in the municipal segment (Exhibit 1). Statistics showed that PVC's share declined with increasing pipe diameter primarily for technical reasons. In the potable water segment, 80% of the 4" – 12" diameter pipes were made from PVC, for larger diameters the share dropped to 51% (15" – 24" diameter), 5% (27" – 36" diameter) and 0% of even larger pipes for which concrete was the dominant material. In the sewer segment PVC's share declined from 84% to 3%; in storm sewers from 37% to 0%.

The U.S. drinking water infrastructure was huge. It comprised 54,000 systems serving a population of about 265 million with 2 million miles of water distribution and transmission pipe.⁵ The sanitary sewer infrastructure consisted of 60,000 systems with 2.5 million miles of sewer mains and service lines.

Between 1975 and 2002 North American demand for PVC pipe and fittings grew from .5 million metric tons to 3.1 million⁶, and more recently during the last five to seven years until 2002, at about 2.3% annually. Demand was sensitive to the economy in that it depended on construction

³ S. Rahman (2007). PVC Pipe and Pipe Fittings: Underground Solutions for Water and Sewer Systems in North America. Paper presented at the 2nd Brazilian PVC Congress, Sao Paulo (Brazil). <http://www.institutodopvc.org/congresso2/ShahRahman.pdf>. (accessed 6/6/2009)

⁴ Rahman, op. cit.

⁵ Rahman, op. cit

⁶ C. Fisher (2006) Evolution of PVC Pipe Markets in the US and Other Regions. Presentation given at the Second Andean PVC Forum, Cartagena, Colombia (March 30/31) www.foroandinopvc.org.co/foro2006/craigfisher1.pdf

(housing, roads) and industrial activity. Demand also varied regionally as a function of population growth which, in turn, was affected by migration patterns.

Aside from regional differences in construction activity, pipe resin prices like those of other commodities were susceptible to many factors and changed monthly. Key was the weather in that hurricanes could shut down production capacity of resin or of feedstock like oil or chlorides causing a sudden spike in prices. The addition of a large new plant that could add 1 billion of pounds/year could exert a downward pressure on prices whereas large-scale terrorist attacks such as 9/11, a war in an oil producing region like Iraq or political turmoil somewhere in key locations caused price spikes (Exhibit 2). Producers at times would try to hike prices but not every increase would stick, i.e. be followed by rival producers.

Pipe manufacturers voluntarily complied with product standards that established minimum performance criteria. These were developed consensually within the industry through the Plastic Pipe and Fittings Association. Product standards were crucial because they served as the basis for code requirements issued by states, counties or cities and as proof of compliance assessed by third parties such as Underwriters Laboratories, the American National Standards Institute (ANSI) or the American Society for Testing and Materials (ASTM) International, Uni-Bell PVC Pipe Association. Therefore, in terms of the key parameters such as diameter inside/outside, wall thickness, weight, elasticity, strength, and temperature-related behavior, pipes varied little from one manufacturer to the other.

Changing needs and regulatory requirements (e.g. environmental protection, minimization of fresh water leakage) stimulated product innovation in a variety of directions, in particular with regard to ease of assembly and installation to reduce costs (e.g. replacing trenches for underground pipe installation with holes through which pipe was pushed or pulled), added features, new applications via increased diameters, or improved joints given that joints were the weak link in a pipeline.

PVC Pipe Manufacturers

Until the late 1970s the number of U.S. players in the PVC pipe industry expanded rapidly. Later, mergers and acquisitions consolidated the industry somewhat fueled by rivals that pursued acquisitive growth as a way to boost market power and share in search of profits. In the 1990s, industry analysts noticed that foreign corporations started acquiring U.S. pipe producers, for example Mitsubishi (Pacific Western Extruded Plastics, OR), Sumitomo (CanTex, TX), Formosa Plastics (JM Manufacturing, NJ) and Compagnie de Saint-Gobain (CertainTeed, PA). However, no single competitor could claim a dominant market share (Exhibit 3).

In terms of plant capacity a survey of North American injection molders indicated that while plant capacity varied considerable, the bulk was medium sized (Exhibit 4). With regard to

geographic spread plants were scattered across the country and not co-located with the resin producers that had their capacity primarily along the Gulf (Exhibit 5).

Pipes had to comply with multiple standards and thus differentiation on features was limited. Buyers tended to be very price sensitive since pipes and their function were a necessity but added little to the final product beyond "doing their job." Municipalities tended to go with the lowest bidder and the construction companies that used the pipes were subject to penalties if they could not complete a project on time and at cost. Therefore, for pipe users, low price and on-time delivery were crucial.

Pipe manufacturing was scale sensitive to some extent. Labor, shipping and energy were the major cost items in manufacturing representing roughly 75% of total cost. Depending on location labor represented between 44 and 51% of operating cost, energy between 7 and 12% and shipping from 14 to 18%.

In the early 2000s the global plastic pipe industry comprised 400-500 companies⁷, and for Canada and the trade journal *PlasticNews* listed about 200 firms engaged as pipe, profile and tubing producers. The players in this industry varied in a number of ways:

- Vertical scope: Some pipe manufacturers were subsidiaries of resin or chemical product manufacturers. For example, Performance Pipe was a division of Chevron Phillips Chemical Company LP, one of the largest producers of polyethylene piping products in North America; North American Pipe was a subsidiary of Westlake Chemical and grew outwards via acquisitions from its original base in Georgia, Kentucky and Mississippi.
- Horizontal scope: Some rivals were exclusively or primarily operating in the pipe business like UPI whereas for others pipes were but one product line in a broad array of building materials. An example of the latter was CertainTeed, a subsidiary of Saint-Gobain, a French MNC.
- Geographic scope: The largest players owned multiple plants spread across North America (Example: North American Pipe Corporation), others operated multiple plants concentrated regionally (Example: UPI), and the smallest players operated out of one plant with limited geographical scope.

Origins of Universal Pipe, Inc.

UPI was founded in 1974 under the name Mirapipe as a 50:50 joint venture between Culver Stevens, Sr., a Shreveport LA businessman and, and a Japanese partner. Mirapipe was located in Mattydale, near Syracuse in upstate New York. Before 1974, it had been the site of Miraculous Technical Products, a manufacturer of wire products sold to nearby companies.

⁷ <http://www.reportlinker.com/p099485/World-Plastic-Pipe-Market.html> accessed 5/27/09

To form the joint venture, the Japanese partner created a Japanese company named Shintech. Two years later, in 1976, Shintech became a wholly owned subsidiary of Shin-Etsu, originally a Japanese fertilizer manufacturer that sought to expand globally with this, its second foreign acquisition. Mirapipe grew and was sold to become part of Crafton Corporation. Crafton was a holding corporation involved in a number of industries. In 1984, in the aftermath of investigation by the State's Department of Environmental Conservation, the Mattydale site was named a Superfund site and placed on the National Priorities List due to high levels of contamination with volatile organic constituents going back to the first owner's use of toxic solvents for cleaning wires. This meant that any construction on the site or change of its use or ownership could not go forward without approval by EPA.

In 1991, Crafton's Mattydale's pipe business was sold to Hansen Plastics of Elgin IL and renamed LCD Plastics. The business went bankrupt since, according to Butler, its parent neglected it and drained the cash from the pipe business to support its primary chemical line. The creditors purchased the company, and then, on December 30, 1996, sold it, now renamed UPI. The new owners were three Japanese companies: Nissho Iwai American Corp. a New York based trading company with an 80% share, Nissho Iwai American's parent, the Japanese conglomerate Nissho Iwai Corp. (NIC), and the Japanese chemical maker Kaneka Corp. with a 10% share each. Kaneka manufactured various plastics products and owned two small PVC additives plants in the U.S. but was not involved in the pipe or PVC resin business directly. At the time UPI was recognized as one of the larger U.S. PVC pipe producers with two plants, the main one in Mattydale NY and the other in Knoxville TN. In Japan NIC was known as a major vinyl extruder that operated seven plants. The new owners retained the president, J. Randy Tagg, as well as all agents and sales representatives. They announced plans to grow by broadening the product line via internal development and acquisitions. The targeted market was housing siding which was one of NIC's main markets in Japan, according to Toshihisa Horikoshi, vice president of the chemical department of Nissho Iwai American. Vinyl siding production relied on a process and raw materials that were similar to pipe manufacturing. After completing the acquisition UPI reported to the Nissho Iwai American Corp., the trading subsidiary in New York City. A direct link to Kaneka was not established.

Company Profile

Dave Butler joined UPI in 1996 as the CFO after the company had changed ownership. This made him the second-in-command at UPI. When he assumed his new position he could claim broad industry experience. "I've been in manufacturing all my life and have worked for 20 businesses in 20 different industries," he explained, not without pride. He was articulate and engaging, in his 50s with graying hair, energetic and the trim body of an athlete with not an extra ounce of fat on his 5'8" frame.

After working in the factory on the shop floor his first management job was that of a foreman. Upon graduating with a Bachelors degree he worked for a while in accounting, and then, after he got his MBA, in a variety of companies and positions climbing through the ranks. When he joined UPI he had prior experience as CFO and COO. His diverse background came in handy when he joined UPI because, even though he was the CFO, he "was helping in manufacturing." At that time, the company's performance was subpar in many areas. It was run quite autocratically and the owner did not invest in the people. Manufacturing efficiency was average at best. Most importantly, it was a command-and-control shop and nothing was done to motivate the labor force and elicit their ideas for continual improvement. Butler set out to change this.

UPI sold exclusively through wholesale distributors. Some of them were very large with nationwide coverage, while others were regional. UPI's sales territory covered the entire Northeastern U.S., some areas west of the Mississippi as well a southeastern Canada. UPI employed three in-house sales managers and about 40 indirect sales reps spread over the sales territory. In terms of prices UPI offered volume breaks depending on order size and frequency, a practice that reflected the industry norm. The company produced PVC pipes for the three major applications – underground (water and sewer), above ground (plumbing) and electrical conduit. On average the company received 40 orders a day and each order comprised about five items. These orders were sold through sales reps in different territories. Competition varied from region to region which meant that prices differed from one customer to the next and by territory. Managing such a set-up required substantial attention to detail and was fairly complex. One of the few ways pipe manufacturers could differentiate themselves from their rivals was the manner in which they handled customer complaints. Providing good service and being understanding and fair even when a complaint was not due to the pipe manufacturer's fault could earn the trust and loyalty of a customer. In 1996 UPI's profile was as follows (Exhibit 6).

Market Share First

Butler was critical of the mode of competition in the industry and of UPI's strategy which he believed created self-inflicted pain on all pipe producers:

When the industry was formed there were a lot of very wealthy people who had high goals set for their businesses based on a system of who was king of the mountain, who had the most sales..... So if their volume started to drop off they would cut their prices in order to maintain a certain volume.

This strategy of emphasizing sales above profits was compounded by the ups and downs of resin prices. Explained Butler:

Resin is a commodity with a certain supply and demand. How do you determine what your [product] price is going to be? If a resin supplier raises their price to us 1 penny in one month and we do 250 million pounds pipe a year that basically cost us another \$2.5 million a year. And so the tiny fractions of money that we deal with mean that we have to count every fraction of a penny. So a 1-penny increase to us is significant. There were times when suppliers announced 2-cent increases every month for six months in a row.... On of the unique difficulties in our market is that we have to take the resin and turn it into pipe, and that's a 60-90 day process. So the contracts to buy resin would be for a month at a time. We buy resin in January. In February we received that resin and started to make it into pipe. In February/March we would put that pipe into our inventory and in April we'd sell that pipe out of our inventory. So resin that was priced to us in January actually goes out to the customer in April because we have a 30-day supply in our inventory. So, from the point of purchase to sales you're looking at a 90-120 day period before we can convert resin purchases into sales which means that a 2-cent increase of the price of resin in January converts to three months of increased costs before we start to get the revenue back. In terms of mode of payment everyone is on 30-60 day terms. We buy resin on terms of ship date from the Gulf coast and then deliver at a certain date to our customer which creates this time lag which is actually closer to 75-105 days. So if there are four consecutive months of cost increases to us the costs are piling up fairly significantly before our revenues come back and that becomes difficult.

He continued:

So what happens then is that our competitors are going out trying to discount pipe sales at a time when costs are going up in an effort to increase volume quicker. They find themselves easy money. We don't want to do that. So our customers come back to us because nobody can pass these price increases on quick enough and we end up going back to the resin people and tell them that we're just not going to buy anymore. Our customers won't take the price increases so they stop buying, we stop buying and the resin people stop selling. So, instead of having six 2-cent increases for a total of 12 cents all of a sudden they're [the pipe manufacturers] backed up to selling for 4 cents less than they were at the beginning [to get rid of their inventory]. It's like bouncing one of these super balls against the floor and when it hits the ceiling it comes back faster than when it went up and the resin makers lose more than they gain.

On September 1, 1999, UPI acquired a plant from North American Pipe Corporation in Jonestown, GA. North American Pipe ranked sixth among North American pipe extruders with 1998 sales of \$320 million whereas in 1999 UPI was listed #35 with \$72 million revenues. The Jonestown plant employed 75 employees, had eight extrusion lines and a capacity of 100 million pounds. UPI's 1999 annual capacity was 230 million pounds before the acquisition. Upon announcing the acquisition UPI's purchasing director explained that it was part of a long-term strategy of expanding westwards. With its three plants UPI now covered the Eastern Seaboard.

The Jonestown plant enabled UPI to better serve its nearby customers by cutting delivery time and shipping costs. The plant would be overhauled from top to bottom. Storage silos and additional extruder lines would be added to handle the increased production.

Butler reminisced:

We were running fairly well [i.e. at the time after I joined the company] except that we had a couple of years we were doing really well, in 1999 and 2000. And then our company's parent, corporate management, decided that the best thing for us was to get bigger. So we bought another business in the South and this turned out to be not a good acquisition. It was too much volume and it was difficult to operate. That company produced a lot of scrap; they had poor factory management. We were trying to raise the skill level of management. But we had excess capacity. We had about 240 million pounds of sales before and after the purchase. We had excess capacity, more cost and they were inefficient in the other location.

The climax occurred in early 2002, a few months after 9/11. UPI signed a contract that promised delivery of 40 million pounds of pipe at very low prices. Management figured it would work out and yield a profit thanks to better capacity utilization. They assumed that the new facility could produce 20 million pounds per month and payment would be received within four months. Instead, only two or three of the eight extruder lines could be used and it took more than a year to fulfill the contract which resulted in a great loss. In July 2003, the extrusion lines at the Jonestown plant were idled; some distribution operations were kept at the location for a little while longer before they were stopped as well.

A New Strategy

In the aftermath of the Jonestown disaster Butler realized that pursuing market share was a prescription for disaster. Profitability needed to come first, even at the expense of sales. This ran counter to industry practice. Butler recalled a large merger that had occurred in the early 2000s that would have granted the new entity some pricing power which it could have used to raise prices.

But after the acquisition they had all this volume that wasn't selling fast enough; so they were emphasizing volume again. They had an opportunity to control the price in the market; they were so big. But instead of using price they used volume again because that had been their target from the beginning.

In the aftermath of the Jamestown debacle Butler and his lieutenants embarked on what he labeled a "scientific" analysis. In early 2000 UPI had about 3,000 customers. Butler and his team succeeded in breaking out profitability by SKU to determine which products were lucrative and which were not; and by sales rep to learn who was profitable and who was not. Finally, profits were segmented by territory, because each region differed in the level of competition which

affected pricing. Since transportation costs were an important factor – shipping pipes essentially meant shipping a lot of air since pipes are hollow – distance mattered. Butler explained:

When we looked at freight that was a key. We found out for instance that it'll cost an extra nickel a pound to go across the Mississippi [i.e. to more distant customers] and therefore we brought our territory back in to the east of the Mississippi only. At the time we had some fairly large customers west of the Mississippi. And we realized that we couldn't sell to them anymore and make a profit even though selling to them meant a higher volume.

Further problems needed to be addressed. In the fourth quarter of 2001 UPI was hemorrhaging cash and decided to approach two of its five resin suppliers and told them that UPI would no longer buy from them because their prices were higher by fractions of a cent. UPI's suppliers were subsidiaries of multi-billion dollar companies like Formosa Plastics Corp. or Occidental Chemical Corporation. This move had a negative impact because the two large suppliers decided to stop selling to UPI henceforth. This increased the leverage of the other three suppliers and they began charging UPI higher prices. To make matters worse, UPI was having difficulties paying its suppliers on a timely basis. "So we owed them an awful lot of money and instead of paying them we went to argue with them that they were taking advantage of us and we shouldn't have to pay them so much money and they didn't really like that," admitted Butler. The difficulties on the supply end impacted deliveries and so customers were unhappy as well.

Sell Out?

In March 2003 Butler assumed the CEO position when Tagg retired after ten years at the helm of UPI. Little did he know that a year later he was given a difficult order – making himself and everyone else in the company obsolete!

The first task Butler set himself was making amends. He spent months on the road and visited suppliers and customers repeating time and again the same message -- that new management was in place, that UPI would honor all contracts, and that he as the new CEO was apologizing for what had happened in the past.

When I took over I went back to the vendor with whom we had haggled the year before and said: "We're going to pay you. Whatever we owe you, we're going to pay you. It will take some time. Will you work with us? And they agreed to work with us. We paid them back everything and they were really pleased with it. They had a very diligent, hardnosed Japanese gentleman who ran that business.

Ultimately Butler was able to convince suppliers and customers that he was serious with his creed "to do the right thing – period – whatever that is."

Butler also achieved his second objective: He managed to convince his suppliers of the detrimental effects for every one of sudden large price hikes. They understood that it was better for all to have multiple 1¢ price increases spread over several months rather than a one-time 6¢ price increase.

By summer 2003 UPI had closed the Jonestown plant and moved some of the equipment to New York and Tennessee to enhance the two plants' efficiency and boost capacity. The in-depth market analysis that he together with his team had conducted earlier provided the empirical basis for the decisions required for becoming profitable again. Yet, UPI's owners weren't interested.

Now, in November 2004, Butler had to make a crucial decision. If he asked the Japanese owners and they consented selling UPI to him, a host of other decisions and actions were necessary. It was doubtful that these could be executed as fast as his superiors demanded given that they wanted to get out quickly before the end of the year. If he caved and allowed private equity through the company's gates he would have to live with a troubled conscience.

As if this uncertainty was not enough the bank UPI had worked with was less than forthcoming when he laid out his options. It withheld the last \$1.5 million of UPI's credit line and would not budge when Butler presented the most recent quarterly statements that indicated that the new strategy was working. The bank's managers were worried since the market was very competitive and demand was still languishing. UPI's liquidity was very tight, the company had \$22 million in debt and the bank's decision closed access to a critical cash reserve in case of an emergency (Appendix 1).

However, the issue that kept bothering him the most was allowing the company enter into bankruptcy followed by a sale. How could he let this happen, he wondered, since throughout his life he had tried to live by his creed -- "to do the right thing -- period -- whatever that is"?

Exhibit 1: Municipal Pipe Material Usage in USA and Canada (2004)
(Percentage Use by Application)

	PVC	HDPE*	Ductile Iron**	Corrugated Steel	Concrete	Other
Potable Water	78	2	18	0	2	0
Sanitary Sewer	81	6	9	0	2	2
Storm Sewer	24	46	0	10	18	2
Drainage	0	86	0	11	3	0
Municipal Total	48	34	8	5	4	1

*HDPE: High Density Polyethylene designed for specific uses such as laundry detergent bottles, milk jugs, natural gas and water pipes.

** Type of cast iron that is not brittle, but flexible and elastic

Source: Rahman (2007)

Exhibit 2: Sample Market Prices for Pipe PVC

Date	Price (¢/lb)
February 2002	19-20
May 2002	23-24
December 2003	29-30

Source: *PlasticsTechnology*, var. issues

Exhibit 3: North American Pipe Market Structure (2003)

Top Ten combined market share	38%
Remaining 228 firms	62%

Source: *Plastic News*

Exhibit 4: Distribution of Plant Capacity

Smaller than 100 tons	23%
100 – 349 tons	41%
350 – 749 tons	24%
750 – 1,199 tons	8%
1,200 – 1,999 tons	2%
200 tons and larger	2%

Source: *Plastic News*

Exhibit 5: Geographical Distribution of Pipe Manufacturing Plants

California	39	
Ohio	38	
Illinois	30	
Texas	27	Total Plants:
Michigan	25	U.S. 428
Georgia	24	Canada 37
Pennsylvania	21	Mexico 9
Ontario	19	
New Jersey	17	178 firms with 606 plants
Indiana	15	173 firms in 474 locations
Missouri	15	
North Carolina	15	

Source: *Plastics News*

Exhibit 6: Profile of UPI in 1996

Production Capacity	160 million pounds PVC pipe <ul style="list-style-type: none"> • 100 million lbs in New York (18 extrusion lines) • 60 million lbs in Knoxville (11 extrusion lines)
Markets Served	Water, sewer, irrigation, electric conduit
Pipe sizes	1.5" – 24"
Sales (1995)	\$65.8 million, #29 on <i>Plastic News'</i> chart of North American Pipe, Profile, and Tubing Extruders

Appendix 1
Financial Statements

Income Statement	1999	2000	2001	2002	2003	2004 Q1	2004 Q2
Sales volume (1,000 lbs.)	239,785	241,221	239,502	230,783	206,734	55,093	54,203
Production volume (1,000 lbs.)	251,772	256,855	244,799	222,458	212,531	45,656	55,752
PVC sale price (avg.)	0.3960	0.5300	0.3800	0.3950	0.4400	0.4433	0.5156
Sale price (Std. Dev.)	0.057	0.063	0.025	0.057	0.020	0.014	0.018
PVC resin cost (avg.)	0.2380	0.3535	0.2540	0.2660	0.3170	0.3107	0.3509
PVC resin cost (Std. Dev.)	0.053	0.024	0.046	0.056	0.021	0.005	0.010
Gross Sales (\$000)	95,978	129,713	91,030	90,533	92,522	24,772	28,276
Less Returns & Allowances (\$000)	90	846	354	427	466	59	73
Less Customer Discounts (\$000)	1,719	2,346	1,637	1,659	1,746	361	511
Net Sales (\$000)	94,169	126,521	89,039	88,447	90,310	24,352	27,692
Manufacturing (\$000)	73,004	101,076	84,077	77,355	83,984	22,037	22,194
Freight In/Out	5,813	6,269	6,566	6,200	5,911	1,647	1,765
Shipping	1,138	1,431	1,206	1,320	1,338	335	327
Total Manufacturing	79,955	108,776	91,849	84,875	91,233	24,019	24,286
Gross Profit	14,214	17,745	(2,810)	3,572	(923)	333	3,406
General and Administrative	3,257	3,725	3,224	3,482	3,502	882	756
Selling Cost	4,129	5,334	3,497	3,887	3,143	672	722
Total Selling, G & A	7,386	9,059	6,721	7,369	6,645	1,554	1,478
Manufacturing Income	6,828	8,686	(9,531)	(3,797)	(7,568)	(1,221)	1,928
Other Op. Income (Expense)	11	43	-	181	-	-	-
Net Income From Operations	6,839	8,729	(9,531)	(3,616)	(7,568)	(1,221)	1,928
Interest Expense -- Term Loans	1,504	1,914	1,834	1,408	1,645	450	527
Interest (income) expense	(313)	(428)	(174)	(29)	-	(66)	(62)
Amortization – Other	223	-	1,500	-	3,476	-	9
Net Other (Income) Expense	1,414	1,486	3,160	1,379	5,121	384	474
Net Income Before Incentive	5,425	7,243	(12,691)	(4,995)	(12,689)	(1,605)	1,454
Incentive Pay	542	754	-	-	-	-	-
Net Income Before Tax	4,883	6,489	(12,691)	(4,995)	(12,689)	(1,605)	1,454
Income tax	2,032	2,740	(5,315)	(1,934)	(4,139)	(664)	554
Net Income (Loss)	2,851	3,749	(7,376)	(3,061)	(8,550)	(941)	900

Balance Sheet	(\$000)	1999	2000	2001	2002	2003
Assets						
Cash		9,367	5,244	15	443	957
Accounts Receivable – total		16,179	10,901	10,539	8,084	8,064
Inventories – total		14,350	24,023	18,486	25,741	17,378
Prepaid Expenses		97	209	289	336	282
Total Current Assets		39,993	40,377	29,329	34,604	26,681
Fixed Assets		28,755	33,935	36,430	43,163	33,441
Less Depreciation		(4,164)	(6,184)	(8,196)	(10,613)	(8,388)
Fixed Assets – Net		24,591	27,751	28,234	32,550	25,053
Other Assets		59	226	2,371	4,483	188
Total Assets		64,643	68,354	59,934	71,637	51,922
Liabilities						
Short term debt		676	739	10,743	27,438	14,441
Accounts Payable – total		18,213	17,713	9,872	19,374	33,258
Accrued Liabilities – total		3,587	3,710	2,419	2,088	2,340
Total Current Liabilities		22,476	22,162	23,034	48,900	35,598
Long-term debt – net		26,597	26,372	21,796	10,550	23,372
Deferred Income Tax		1,842	2,341	-	-	-
Liabilities – total		50,915	50,875	44,830	59,450	58,970
Common Stock		10,000	10,000	15,000	15,000	15,000
Retained Earnings		3,728	7,479	104	(2,813)	(22,046)
Shareholders' Equity		13,728	17,479	15,104	12,187	(7,046)
Total Liabilities & Equity		64,643	68,354	59,934	71,637	51,924

Appendix 2

Private Equity Buyouts

The purchase of a company by a privately owned company is called a private equity acquisition. The most common form is a leveraged buyout in which the purchasing company takes control by using the acquired company's assets as collateral to raise the capital for the acquisition. Private equity acquisition has the potential to cause problems detrimental to the acquired company. A number of different scenarios can leave the purchased firm in a worse state than before the deal was initiated.

In an acquisition through private equity the investors tend to be most concerned with the purchase price and the debt that will be realized in conjunction with the acquisition. This often compels private equity firm to make the purchased firm file for bankruptcy. Bankruptcy allows the new owners to relieve some of the financial pressure of the purchase. Essentially, by filing for bankruptcy the firm avoids paying past debts to creditors and suppliers. Bankruptcy may make it difficult for the firm to rebuild relationships with those suppliers and creditors that it failed to pay and to continue to do business and, ultimately, emerge from Chapter 11.

Often private equity firms have no interest in fixing the acquired company. In this case the company is bought only to be sold for a higher profit as quickly as possible. In order to make a profit from the purchase private equity might chose to disband the firm and sell off the assets piece-by-piece to different parties in order to maximize profits. In such a situation the employees of the acquired firm will be out of work. The sell-off also disregards the past work put into the company. Companies tend to hesitate to sell to private equity firms in fear that this will be their fate but the owners, themselves interested in receiving the maximum return, may consent nonetheless especially in the case of widespread ownership with little commitment to the firm itself.

C. Blaydon and F. Wainwright. 2006 The Balance Between Debt and Added Value. *Financial Times* September 28: 6-8.

S.N. Kaplan and P. Stromberg. Leveraged Buyouts and Private Equity. June 2008.
<http://ssrn.com/abstract=1194962>.