The Pac-Man Strategy: Roll-up Patterns and Processes in Three Industries

by

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Submitted to the Alfred P. Sloan School of Management
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ABSTRACT

The history of some U.S. service industries includes a period of rapid consolidation through the acquisition of many firms by one or a few competitors. This is often referred to as a "roll-up", with the designation used both as a verb in referring to the process and as a noun in referring to the company doing the acquiring. Roll-ups have become a well-known phenomenon since at least 1971, when Waste Management Corporation commenced an aggressive roll-up of the North American solid waste industry.

In this paper, we look at the roll-up phenomenon closely and identify some of the patterns that characterize the process. We examine the history of three U.S. service industries -- solid waste, funeral homes, and landscape maintenance -- each of which has experienced (or is experiencing) rapid consolidation through the roll-up process. In our investigation, we identify common characteristics as well as key differences among the three, and investigate the background of the industry, the market forces that appeared to be driving the industry dynamics at the time the consolidation efforts began, the pattern and processes of consolidation, and the results of the consolidation effort. In doing so, we identify potential industry characteristics and elements of the roll-up process that may have been contributing factors in determining the outcomes.

The analysis employs several concepts and frameworks from the corporate strategy literature. Chief among these is Porter's five forces model of industry structure (Porter 1980). Additional concepts used to compare and contrast the three industries and the consolidation of each include minimum efficient scale, economies and diseconomies of scale, and inspection and integration issues related to merger activity (Oster 1999).

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Chapter 1: Introduction

The structure of any industry is dynamic, changing constantly as the result of new entrants, new technologies, new regulations, and changes in demand. One significant area of industry structure that changes over time involves the number and size of the firms competing in the market, sometimes referred to as the concentration of the industry.

Many factors may drive changes in this area. Utterback, for example, has documented how the introduction of new technology in an industry is generally accompanied by the arrival of many new entrants, while the subsequent emergence of a new dominant design correlates with an exit of many firms and greater industry concentration (Utterback 1996). Other potential reasons for changes in the number or size of participants in an industry include regulatory changes, changes in buyer tastes and related changes in demand, demographic changes or simply the competitive success of one or more participants over time.

In the service industries, one particular type of change in industry structure related to the number and size of participants involves the rapid acquisition of many firms by one competitor. This is often referred to as a "roll-up", with the designation used both as a verb in referring to the process and as a noun in referring to the company doing the acquiring. Other terms used to designate the acquiring company include "agglomerate" and "consolidator." Roll-ups have become a well-known mechanism in the U.S. since at least 1971, when Waste Management Corporation commenced an aggressive roll-up of the North American waste management industry.

Over time, the popularity of the roll-up model grew. For example, in 1995 Inc. Magazine named a consolidator, Paul Verrochi of American Medical Response, as its entrepreneur of the year. Verrochi had built a large enterprise based on the rapid acquisition of small, local ambulance companies. In their article describing Verrochi's accomplishments, the article employs the apt phrase of "Pac-Man strategy"\(^1\) to describe the model he employed, which

\(^1\) Pac-Man is a video game in which the player controls a character that gobbles dots and other characters. Pac-Man is © 1980 1999 Namco Ltd. All Rights Reserved.
involved combining four companies into a publicly-traded entity and then proceeding to acquire nearly 50 more (Finegan 1995).

The same article, however, notes that the roll-up mechanism is not universally applicable or without risk. The article makes the point that "if there are real savings and economies, then [roll-ups] will probably continue. But if benefits don't materialize -- and they don't always -- it will be status quo for a long time." In fact, the record of success for roll-ups is mixed. While some have been very successful in creating shareholder wealth and sustainable advantage for the consolidator, others appear to have failed on both counts.

In this paper, we look at the roll-up phenomenon closely and identify some of the patterns that characterize the process. We examine the history of three U.S. service industries – solid waste, funeral homes, and landscape maintenance -- each of which has experienced (or is experiencing) rapid consolidation through the roll-up phenomenon. In looking at these industries, we will identify several common characteristics as well as key differences. For each industry, we look at the background of the industry, the market forces that appeared to be driving the industry dynamics at the time the consolidation efforts began, the pattern and processes of consolidation, and the results of the consolidation effort. In doing so, we identify potential industry characteristics and details of the roll-ups that may have been contributing factors in determining the outcomes.

In our analysis we will employ several concepts and frameworks from the corporate strategy literature. Chief among these is Porter's five forces model of industry structure (Porter 1980). Additional concepts employed will include minimum efficient scale, economies and diseconomies of scale, and inspection and integration issues related to merger activity (Oster 1999).

From our analysis, we are able to conclude that roll-ups can be seen from two distinct perspectives, one financial and the other strategic. As a financial maneuver, a roll-up may be driven by a financial outsider rather than an industry participant, and the focus is typically on short-term gains created as a result of the difference in acquisition cost and subsequent stock market or sale value for the consolidated entity. As strategy, roll-ups may be seen as a way to react to fundamental changes in industry dynamics such as technology or regulatory changes. These two perspectives correspond to the observation that rapid consolidation of an industry can commence and proceed for a number of reasons, ranging from financial opportunism to
fundamental changes in industry dynamics to the hubris of an individual leader of an industry competitor.

With these observations as a platform, there are two significant hypotheses we form from our examination of roll-up patterns and processes in three industries:

1. When supported by changes in fundamental market dynamics such as technology changes, the emergence of new substitutes, altered barriers to entry or new operating models, consolidation appears to have the potential to be an effective strategy. When not so driven, long-term competitive advantage may be more elusive.

2. The process of consolidation has both primary and secondary effects. The secondary effects, which involve reactions by the industry participants and altered industry dynamics, may derail consolidation strategies and lead to negative outcomes. Successful consolidators not only participate (and often drive) the initial horizontal merger activities but are able to exploit the secondary effect through strategies such as vertical integration in the restructured industry.

As noted in the concluding chapter, these hypothesis could well form the basis for a more statistically-oriented investigation of roll-ups across many industries.

This paper is organized into six chapters in addition to this introduction. In Chapter Two, we describe the general patterns and processes of roll-ups and the evolution of the strategy over time. In Chapters Three through Five, we look at the three industries in depth, documenting and analyzing the process of consolidation in each and profiling some of the leading firms involved in the process. After reviewing the three case examples, we then look in Chapter Six at the future of roll-ups, including a discussion of the impact of accounting rule changes in the U.S. and the appearance of the Internet as a commerce environment. Building on the information gathered in relation to the landscape industry, we discuss the role of the Internet as a possible tool for “virtual consolidation” of that industry, and we conclude with a forward look at the viability of the roll-up process as a competitive strategy going forward. In Chapter Seven, the final section, we summarize our key observations and provide some suggestions for future research on the roll-up phenomenon.
Chapter 2: The Roll-up Phenomenon

The growth of businesses through mergers and acquisitions is a practice that is probably as old as business itself. In their endless drive to grow and expand profits, firms have only a few alternatives such as competing on price and performance, innovating new products or expanding geographically. None of these organic growth strategies can compare with an acquisition strategy for speed.

In this chapter, we will first provide a short summary of some of the fundamental thinking in the mergers and acquisitions field, including categories of mergers, some of the potential causes of horizontal mergers and acquisitions, and the results of M&A activity in general. Using this information as a platform, we will then look at roll-ups to see where this particular breed of acquisition fits in.

I. Patterns of Industry Consolidation

Economists and financial analysts have typically described mergers and acquisitions as falling into three basic patterns. Vertical mergers, the first type, involve business combinations in which an acquiring firm targets a supplier or buyer in its value chain. For example, if an oil refiner targets an exploration and drilling firm, this is known as a vertical combination in the backward, or "upstream" direction. If the same firm were to acquire a distribution company or a manufacturer of oil-based products, it would be forward (or downstream) integration (Oster 1999).

A second type of combination is known as conglomerate merger, in which a firm seeks to grow through acquisition of another firm that is not in its industry. If the business of the target and the acquirer are entirely unrelated, the term used is pure conglomerate. Often, however, the firms are in adjacent markets, and the goal of the combination is either product extension or market extension, referring to the attempt by a firm to leverage its strengths or assets into adjacent market spaces (Karlan 1993, p.143). The 1960's in the U.S. included a large amount of conglomerate M&A activity, with the creation or expansion of firms such as ITT, Beatrice and Gulf/Western. Many of the conglomerates created in the 60's were subsequently dismembered in the 1980's.

The third merger pattern is known as horizontal merger, in which the acquiring firm purchases a direct competitor offering a substitute product or operating in a separate
geography. This pattern of combination has a long and relatively successful history, and is the type of combination involved in roll-ups.

II. **Horizontal Mergers**

In recent U.S. business history, one can look at the era around the beginning of the 1900's as one of the earliest periods of merger and acquisition history to receive serious study. Much of the activity of this period was horizontal in nature, and the impact of this period can still be seen in several industries.

For example, the U.S. oil industry still bears the imprint of the rapid acquisitions made by the Standard Oil Company at the turn of the century. Beginning in the 1870's, Standard's head, John D. Rockefeller, methodically purchased 20 of 25 refiners in Cleveland, resulting in an increase in U.S. market share for Standard from 10 to 20%. The firm then continued to purchase refiners in other cities, and by 1878 had a market share estimated at 90 to 95% (Karier 1993, p.138). As the acquisitions proceeded, Rockefeller used the buying power he was amassing to gain cost advantages, making each of his subsequent targets more vulnerable to his offers. In this case we see one set of possible motivations for horizontal mergers; to increase the acquirer's power as a buyer and increase their pricing power through monopoly power. In 1911, Standard was found to be in violation of the Sherman Act, and was dismembered into 34 businesses, many of which have evolved into familiar names of today (Exxon, Mobil, Chevron, and Conoco, for example). Ironically, in the last 10 years several of these firms have been the target of M&A activity intended to reconnect them.

Other examples of early horizontal merger activities include the formation of General Motors and General Electric. GM grew into a competitor to Ford through an acquisition pattern that started with the consolidation of five automobile factories in 1908 followed by additional acquisitions including Cadillac, Buick, Chevrolet and Adam Opel (Germany). Similarly, General Electric came about through consolidation of eight plants at the turn of the last century and was able to gain a significant share of the growing electrical equipment industry.

These examples show the power of horizontal mergers to create sustainable advantages for the acquiring firm, and illustrate what economists see as the primary motive for horizontal merger activity, the creation of monopoly power. Other motivations for horizontal mergers cited by economists include the reduction of costs through economies of scale and purchasing power, easier access to capital, and more efficient marketing methods (Karier 1993, p.138).
In the case of Standard Oil and John D. Rockefeller, it also seems possible that ego may have been a factor as well. Rockefeller enjoyed the type of reputation as a business legend that Bill Gates enjoys today, and without regulatory checks may have developed a sense of unlimited power (Chernow 1999). In the specialized case of horizontal merger activity that has come to be called a roll-up, many of these same factors seem to be at work, as well as the motivation by financiers for short-term returns.

III. The Roll-up Model

In the services sector, there have been several examples of industry segments that have undergone rapid restructuring through horizontal merger activity using a particular strategy sometimes referred to as a "roll-up." One early example was the rapid acquisition by Theodore Vail of the American Bell Telephone company in 1907. Using an aggressive strategy based on the use of his long distance service as a lure to local customers, Vail caused incumbent local phone companies to rapidly lose value until he could acquire their assets at distressed prices. Then he added those assets to his network and moved on, increasing his market position as he went (McKelvey 1999).

Another early example was Beatrice, which in its formative stage of growth, starting in 1905, grew rapidly through the acquisition of regionally dispersed dairy operations (Baker 1992). The aggressive and rapid pattern of acquisition used foreshadows many of the roll-ups initiated in the last 20 years, and the firm implemented a decentralized, regional operating model with centralized financial and administrative services, which is the prevalent model in modern roll-ups.

The Beatrice story also illustrates several other interesting consolidation patterns that we will see in other industries. For example, their consolidation was based not only on ambition, but on an underlying change in technology. The advent of refrigeration allowed for more centralized, larger dairies, changing the minimum efficient scale of operation and giving the larger firm a fundamental advantage based on the change in the economics of the business. Still another pattern in the Beatrice story was their subsequent move into related businesses to capture economies of scope, a move mirrored by some later consolidators. Later in the evolution a conglomerate diversification strategy took hold, a strategy that was ultimately unsuccessful and resulted in the destruction of the firm.

What makes these examples appropriate to the term roll-up? The roll-up pattern is characterized by the rapid speed of the acquisition activity, the fragmentation of the market
before consolidation, and the small size of the target companies. In addition, roll-ups include
the use of one (or more) of the industry incumbents as the roll-up vehicle, and often feature the
use of aggressive financial techniques and the use of stock as the acquisition currency.

For example, in the waste management field and the funeral home business, fragmented
industries consisting of many small, local (often family-run) operators gave way to a small
number of large, well-capitalized consolidators who grew primarily through the acquisition of the
smaller competitors. The roll-up strategy differs from expansion along the vertical dimension of
the value chain or the creation of conglomerates, in that the goal is not increased strategic
control or entry into new businesses. The roll-up approach simply involves growth in size
through acquisition of smaller, relatively homogenous operators by a consolidating firm, typically
resulting in an expansion of geographical market coverage.

The consolidation of the U.S. waste industry is in many ways the prototype of the
modern roll-up, executed in a rapid, aggressive manner and powered by newly issued stock.
The history of this market is reviewed in detail in Chapter 3. Other examples of industries in the
U.S. that have been "rolled up" are listed in Exhibit 2.1.

**Exhibit 2-1: Some industries that have been rolled up**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Consolidator(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid waste</td>
<td>Waste Management, Browningferris</td>
</tr>
<tr>
<td>Commercial leasing</td>
<td>Unicapital</td>
</tr>
<tr>
<td>Flower distribution</td>
<td>USA Floral</td>
</tr>
<tr>
<td>Telemarketing</td>
<td>Telespectrum Worldwide</td>
</tr>
<tr>
<td>Landscaping</td>
<td>Landcare USA , Service Master</td>
</tr>
<tr>
<td>Funeral homes</td>
<td>Loewen, SCI</td>
</tr>
<tr>
<td>Ambulance service</td>
<td>American Medical Response</td>
</tr>
<tr>
<td>Concessions</td>
<td>Fine Host Corporation</td>
</tr>
<tr>
<td>Medical imaging centers</td>
<td>Medical Resources Inc.</td>
</tr>
<tr>
<td>Metal fabricators</td>
<td>Metals USA</td>
</tr>
<tr>
<td>Motor coaches</td>
<td>Coach USA</td>
</tr>
<tr>
<td>Medical practices (eye)</td>
<td>Physicians Resource Group</td>
</tr>
<tr>
<td>Office supplies</td>
<td>U.S. Office Products</td>
</tr>
<tr>
<td>Local parcel delivery</td>
<td>U.S. Delivery Systems</td>
</tr>
<tr>
<td>HVCA Contractors</td>
<td>Comfort Systems USA</td>
</tr>
</tbody>
</table>
IV. Roll-up Patterns and Processes

Implicit in the concept of roll-ups is that the industry must be large, fragmented and consist of smaller, private firms. In addition, in an article in Mergers & Acquisitions, Peter McKelvey provides guidelines to look for in identifying industries that are ripe for consolidation. Among the questions he suggests as most important to ask in assessing the potential of an industry for consolidation are whether a larger competitor will be able to gain economies of scale, and whether both a suitable platform (vehicle) and a sufficient number of targets are available in the industry (McKelvey 1999). He also suggests that careful consideration be paid to whether there will be competition for the targeted acquisitions, a point which, as we will see in Chapter 4, was a pivotal issue in the problems that developed in the funeral home roll-ups.

Roll-ups can be seen as both a competitive growth strategy and a financial maneuver. In completing a large number of acquisitions rapidly, the acquiring firm typically finances with debt to grow to a suitable critical mass for a public offering. Once public, equity is used aggressively to finance additional acquisitions. Today, there are several financial firms that specialize in funding and driving roll-ups, including Notre Capital Ventures, which is discussed in greater detail below.

Integrating McKelvey’s points with our own observations on patterns and processes in roll-ups, Exhibit 2-2 summarizes the four primary characteristics of these ventures.

Exhibit 2-2: Some typical characteristics of roll-ups

<table>
<thead>
<tr>
<th>Area</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry</td>
<td>Fragmented service industry with low concentration.</td>
</tr>
<tr>
<td>Firms</td>
<td>Many small, private firms, often with less than $1 million in revenue, and often family businesses</td>
</tr>
<tr>
<td>Merger pattern</td>
<td>Rapid and aggressive acquisition of many, often 100’s, of many small firms across geographies by an industry competitor.</td>
</tr>
<tr>
<td>Financial mechanism</td>
<td>Aggressive. Typically debt used until IPO, then mixture of equity and cash used to fund acquisitions. Later roll-ups sometimes bypassed the debt stage, proceeding directly to the public markets for capital.</td>
</tr>
</tbody>
</table>
Notre Capital Ventures is one of several firms that specialize in organizing and funding roll-ups. Founded in 1993, the firm has been involved in several industries and has led eight of the firms they organized to initial public offerings. Interestingly, like many of the players involved in consolidations, they are direct descendents of the waste consolidations, with two executives from AllWaste and one from BrowningFerris. From Notre's perspective, there are several factors at work creating industry consolidation opportunities.

In an group interview with Steve Harter, the head of Notre, one participant noted that, "A lot of post-war generation people started these companies; they're now retiring. They want to cash out or their children want to cash out....That's one of the things fueling the consolidation trend" (Perin 1997). This pattern can be observed in almost all roll-ups, which is why industries dominated by family-run businesses are the typical target. In many articles, one hears of the pain involved in a family's decision to sell. One owner, having reached the decision to sell the family's heating and refrigeration business, tells of informing his father of the decision:

> When I talked to him on the phone, he broke down in tears. From his perspective, he had worked all his life to develop a good successful business for the future of his family, and we were thinking of selling out (Mahoney 1997).

Another point made in the Notre interview referenced above is that consolidators can be an important source of capital, especially for small companies facing technology or regulatory changes. According to Harter, "...being able to provide capital at a very reasonable price is another very value enhancing thing for these companies..." Harter also noted the fact that the industries targeted generally lend themselves to a decentralized management structure, and that "it's critical (to) find entrepreneurs who are willing and able to stay on for significant periods of time to create the companies." Overall, Notre promotes roll-ups as a strategy that benefits all the parties involved, including the customer. The benefits they promote, taken from their web site, are listed in Exhibit 2-3.

As noted earlier, roll-ups are a financial maneuver as well as a competitive strategy. Early roll-ups involved using debt to reach critical mass, then the launch of a public offering and use of the stock as a currency to continue the acquisitions. Waste Management was the prototype of this model. More recently, Notre has been a leader in the creation of "consolidation IPOs", also known as "poof" companies, which involves merging companies, which have not previously operated together, concurrently with the closing of their IPO. The term "poof" refers to the idea that the public firms appear instantly, seemingly out of thin air. LandCare USA is a
"poof" company created by Notre as a consolidation vehicle for the lawn maintenance industry, which is the subject of Chapter 5. More than 100 such companies have been launched since the modern prototype, U.S. Delivery, was launched in 1994, with 50 launched in 1997 alone (McCafferty 1998).

**Exhibit 2-3: Advertised benefits of roll-ups**

| Benefits to Entrepreneurs | Greater financial security and financial rewards  
| | Personal liquidity  
| | Enhanced estate and personal financial planning  
| | Elimination of personal guarantees and company debt  
| | Lower capital gains rates  
| | Hands-on participation in building a premier national company  
| Benefits to Customers | Confidence in a reliable, national market leader  
| | An extensive range of products/services from a single source  
| | Lower total costs  
| | Access to national service and support  
| Benefits to Employees | Increased advancement opportunities in a national organization  
| | Equity incentive programs, including stock options, and other financial rewards  
| | Management development programs  
| | Broader training and education opportunities  
| | Improved comprehensive employee benefits package  
| Benefits to Companies | Economies of scale and a broader service offering, resulting in increased competitiveness  
| | Sharing of best practices with member companies in the consolidation  
| | Enhanced access to capital  
| | Greater national visibility  
| | A stronger force in attracting and retaining quality employees  
| | National support for core administrative and corporate functions allows you to focus on your core business  

One financial perspective on roll-ups is that they are essentially arbitrage maneuvers, where the price paid to the entrepreneur is less than the value of that firm, from a price/multiples

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perspective, on a pro forma basis as part of the larger entity, or as priced by the public market. In other words, if a firm can be bought for three times the earnings they have booked, the pro forma value of those earnings on the acquiring companies books may be five times earnings simply due to projected cost efficiencies. Beyond that, it may well be that the market is willing to pay 10 or 12 times the value of those earnings as part of a publicly traded company.

V. **Market Forces in Roll-up Industries**

The causes of rapid consolidation in industries appear to vary widely, from fundamental changes in technology and buying patterns to simply the profit-driven activities of financiers. In the industry studies that follow, we will see examples of each extreme.

As noted earlier, industries that are targeted for consolidation tend to be highly fragmented and populated with small service providers. From a market forces perspective (Porter 1980), this results in very low market power for the industry participants, and conversely, high supplier power for the firms which supply their needs. Similarly, there is also usually relatively high buyer power in the hands of their customers, since the industry participants are numerous and small, providing customers with many alternatives. A summary of the structure of the typical industry targeted for consolidation is provided in Exhibit 2-4.

**Exhibit 2-4: Typical market forces in industries targeted for consolidation**

<table>
<thead>
<tr>
<th>Market Force</th>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer power</td>
<td>Relatively high. Industry competitors are in a fragmented service industry with low concentration, so customers have many choices.</td>
</tr>
<tr>
<td>Supplier power</td>
<td>Relatively high. Industry consists of many small, private firms, typically with less than $1 million in revenue, which are often unsophisticated family businesses, while suppliers are fewer and larger.</td>
</tr>
<tr>
<td>Rivalry</td>
<td>High. These industries are very fragmented with many competitors.</td>
</tr>
<tr>
<td>Barriers to entry</td>
<td>Low. As service businesses, capital costs are relatively low. Primary barrier is customer relationships.</td>
</tr>
<tr>
<td>Substitutes</td>
<td>Few or none. Most of these industries are based on fundamental services that have few alternatives.</td>
</tr>
</tbody>
</table>

One of the most important factors that characterize roll-ups is in the barriers to entry area, which is typically very low. Similarly, the small, private nature of the incumbents testifies
to the fact that the minimum efficient scale in the typical industry targeted for consolidation is typically extremely low, with owner/operators successful with single locations or routes.

Minimum efficient scale refers to the smallest size that operating units can be and still compete effectively. In industries with expensive, task-specific equipment, minimum efficient scale is extremely high because that equipment must be utilized effectively and efficiently to gain economies of scale. Operations that cannot afford to put such equipment to use cannot compete. The low minimum efficient scale of small service businesses sets the stage for the roll-up strategy to be effective by allowing many small firms to be aggregated into one larger competitor.

In some consolidating industries, regulation also appear to play an important role. This was the case in both waste and funeral homes, as will be seen in the next two chapters. In the case of waste, technology changes also appear to have been an important dynamic at work.

The table above represents the state of the typical industry being consolidated at the beginning of the process. Through consolidation, the structure changes. In fact, one of the most often-cited benefits of consolidation for the participants is an increase in purchasing power. According to Paul Verrochi, the founder of AMR, a consolidator of ambulance operators, "When we consolidated, we gained economic clout, and that brought us opportunities" (Finegan 1995). He cites the example that as the largest purchaser of ambulances, AMR is able to pay an average of 15% less than its competitors for vehicles and equipment. He also notes that "becoming a public company has also opened the doors to sources of capital that private companies don't have," and points out that this allows the acquisition of expensive technologies and equipment that reduce costs in the long term.

Economists typically view horizontal mergers as being about increasing monopoly power. While aggregation does increase some aspects of market power, typical roll-ups gain less than a 5% share of an industry. The dynamics of an industry, and the changes in those dynamics through the process of consolidation, are important, however. For example, if multiple consolidators are vying for acquisitions in an industry, prices for firms are bid up, as happened in the funeral home industry. This reduces the financial returns to the consolidator -- essentially defeating the "arbitrage" opportunity.

Other dynamic changes occur in an industry and its structure through the process of consolidation. For example, if larger competitors can achieve economies of scale that are unavailable to smaller competitors or can avail themselves of reduced-cost capital to invest in
productivity-enhancing technologies, then the minimum efficient scale in the industry is altered and the forces driving consolidation are reinforced and accelerated. In such cases, such as occurred in the waste industry, smaller competitors cannot survive and sustainable advantage is created for the consolidator.

VI. Summary

While the basic structure of industries targeted for consolidation are similar, the catalysts involved and processes used vary considerably, and the results of consolidations vary. Some consolidations have resulted in the creation of long-term sustainable enterprises, while others have collapsed under their own weight.

The key differences in consolidation strategies include the manner in which industry structures and dynamics change through the process of consolidation. In the next three chapters, we will look at the solid waste, funeral home, and landscape maintenance industries and the process of consolidation that each underwent. In doing so, we will be looking for common patterns as well as differences that may account for the different outcomes achieved in an attempt to form some hypotheses about the factors that accompany success and those that signal potential problems.
Chapter 3: The Modern Prototype: The U.S. Waste Management Industry

I. Introduction

This chapter looks at the history of the solid waste management industry in the U.S. with the goal of understanding the conditions that lead to rapid consolidation of the industry beginning in 1970. By looking at the solid waste management industry before consolidation, examining the changes that occurred during the consolidation process, and profiling one of the consolidators, Waste Management Corporation, we will identify several of the typical factors involved in service industry consolidations.

In this particular industry, it appears that technology changes played a significant role in setting the stage for a small number of competitors (including Waste Management and BrowningFerris) to rapidly grow through acquisition. Several authors, including Utterback (1994) and Christensen (1997), have explored the relationship between technology change and industry structure. Both these investigators looked at how disruptive changes in the evolution of technology in an industry sector can lead to industry reformation and changes in leadership. In this chapter we will see that technology change did, indeed, drive the restructuring of the trash business, though unlike examples offered by Utterback and Christensen, these technologies were not radical improvements driven by customer requirements, but rather rapid evolutionary changes driven by regulation and public policy.

II. Industry Background and Structure

The history of waste management extends back to the first civilizations. As soon as man evolved from a hunter-gatherer existence to a stationary life, where the refuse of life should be put became an issue.

Early Trash Technology

Archeological excavation of Bronze Age Troy has revealed that the common practice then was simply to let debris accumulate on the floor, where it would flow to the edges and the corners (Rathje & Murphy 1992). After a period of time, the inhabitants would spread a fresh layer of soil over the accumulated detritus. Of course, that meant that over time doors would have to be heightened and roofs raised, and this is exactly what can be found in the remains of
these civilizations. This approach to the management of garbage was a remarkable foreshadowing of modern landfill practice, and the ultimate result was simply that many ancient cities such as Troy grew atop their accumulated trash.

Another initial approach to garbage management was not much more sophisticated, but persisted for more than a thousand years. This consisted of throwing trash out the window, instead of simply dropping it in place. This practice was prevalent through Victorian times, and was the common practice in the U.S. at the time of the Revolution. While the result, of course, was fouled streets, in some ways the practice actually worked fairly well. In fact, two key "technologies" were at work in this primitive model. The first was the idea of recycling, which was accomplished simply through human scavenging among the refuse in the streets. The second was an early implementation of the "reduction" model of solid waste management, in which hogs, dogs and vermin reduced the amount of effluent by consuming organic components of the waste stream.

If we assume that some trash was burned as well (certainly people would have grabbed whatever they could for fuel), we have in the examples above early incarnations of all the approaches used to manage waste today: burn it, bury it, reuse it, or reduce it (the latter phrase refers today to source reduction - in previous eras of trash technology it referred to reducing waste after it was produced).

Evolving Garbage Practices in the U.S.

Collection

Eventually, and in the face of large-scale epidemics attributed to vermin-transported infections, street cleaning emerged as a municipal service. This was as simple as a laborer with a horse-drawn cart, broom and shovel, and the garbage thrown into the streets would be removed periodically and carted to a central pile, or dump. Thus, the technology of trash evolved to include machine-aided manual labor and centralized dumping, typically at sites just outside the city or town limits. One additional important development during these times was the concept that residential trash collection should properly be a municipal service, managed by

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3 Credit for the first municipal street cleaning in the U.S. goes to Ben Franklin, who initiated the service in Philadelphia in 1757.
government and paid for by taxes. Often, however, commercial and industrial trash removal remained in the realm of private business.

This approach to the collection and removal of garbage continued as the primary model of municipal waste management right into this century. In the first half on the 1900’s, the primary changes were simply to have trash aggregated and picked up from its place of origin (rather than thrown in the streets), and the use of trucks instead of carts. See the example of an early rubbish truck in Exhibit 3-1.

**Exhibit 3-1: Early rubbish truck**

```
Mfg. by RELIABLE TRUCKS, INC.
3787 S. MICHIGAN AVE.
BNE 6000
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Brooms and shovels were still the critical tools, and dumps were still open affairs, located close-in to the cities and towns they served. The dumps, of course, were not just end-repositories but also accumulation points for human (and other) scavengers, so that recycling technology continued to be an important part of the model. In fact, in his painting *Back Bay Lands* (1859, reproduced below in Exhibit 3-2), Winslow Homer provides an image of impoverished scavengers picking over massive garbage piles in the Back Bay area of Boston (more on early landfills below).

**Exhibit 3-2: Back Bay Lands, Winslow Homer, 1859**
Recycling

Recycling in this era was sometimes more organized, as well. The rag and paper recycling industry at the beginning of this century, for example, involved the use of these materials to make paper, and was vibrant until virgin materials became more widely available and labeling requirements discouraged the use of second-hand materials. Before then, rags would fetch as much as $350 per ton and paper $160 per ton (in 1990 dollars) (Rathje & Murphy 1992). There were several other approaches to trash management that gained in popularity in the first half of this century, and these are interesting in that each continues to have modern-day equivalents. Near the turn of the century (1900), incineration became increasingly popular, as well as a process called “reduction.”

Incineration

In the late nineteenth century and through the first half of the twentieth, incineration also became an important part of our waste management repertoire. Incineration was adopted from Europe, with the first incinerator becoming operational in 1874 (Rathje & Murphy 1992). The technology initially failed in this country, however, due to differences in trash composition. Trash in the U.S. was, on average, far wetter than in Europe, so proper burning was difficult. As evidence of the initial failures of incineration, of 180 incinerators (then known as crematories) opened in a 25-year period at the turn of the century, 102 were closed within a year of the end of that period (Whitaker 1994).

Reduction

One of the more innovative (and disgusting!) approaches to garbage management in the U.S. in the earlier part of this century was the reduction process. This approach involved a process in which organic debris such as animal carcasses (13,000 in New York City in one year) and manure (20 pounds per day per horse) were collected and “stewed” in vast cauldrons. Promoted by a New York City sanitation official (Col. George Waring) at the turn of the century, the resulting byproducts included rendered fat and glycerin (used in soap) and a reduced organic material used for fertilizer (Alexander 1993).

Dumping

Through the 1950’s, most garbage in the U.S. was still simply dumped and left to decay and to scavengers (human and otherwise). Some deliberate landfilling occurred as well, however, as in the example cited above in Boston, in which the Back Bay was not filled only
with natural fill; garbage was a major component as well. Deliberate use of garbage as fill is also found in other cities as well, including New York, in which sizable amounts of waterfront property were created and extended through organized filling projects. The state of the technology, however, was primitive, in that trash was simply dumped and left to decay.

The Waste Management Industry Prior to Consolidation

Overall, we have seen that in the first half of the 1900’s there was limited technology involved in trash management. Collection now involved mechanized vehicles, and earlier incineration models and the reduction process were tried but, for the most part, discarded. Mostly, garbage was dumped. It is at this state of technology that the origins of Waste Management can be discerned.

The structure of the solid waste management industry in the middle of the last century featured a large number of small, family run operators in the commercial portion of the business, with municipalities generally responsible for residential trash collection. From a market forces perspective, the trash haulers had little market power since they were numerous, small and not organized (a notorious exception was the combination of trash haulers and organized crime found in some cites, in which market power was increased through illicit means). They had limited supply requirements, since they were operating in a low-technology, service based business. They were competitive among themselves, and therefore their customers had options and resulting price influence. Although there were few substitutes, there were also very few barriers to entry since the minimum efficient scale was as little as one owner/operator in one truck. A summary of the market forces as they existed at the beginning of the consolidation era is captured in Exhibit 3-3.

Exhibit 3-3: Market forces in the solid waste industry prior to consolidation

<table>
<thead>
<tr>
<th>Market Force</th>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer power</td>
<td>High, buyer has options to select among competitors</td>
</tr>
<tr>
<td>Supplier power</td>
<td>Moderate. Supplies are not unique to the industry, and suppliers are numerous and fragmented</td>
</tr>
<tr>
<td>Rivalry</td>
<td>High, many small competitors</td>
</tr>
<tr>
<td>Barriers to entry</td>
<td>Extremely low, minimum efficient scale in as little as one truck with owner/operator</td>
</tr>
<tr>
<td>Substitutes</td>
<td>None</td>
</tr>
</tbody>
</table>
III. **Consolidator Profile: Waste Management Corporation**

Waste Management evolved from a family run business in the 1950's and 60's to become the world's largest waste management firm in the 70's and 80's. The primary creator of the firm, Dean Buntrock, became part of the Huizenga family through marriage, and then took over the local family garbage hauling business in Chicago. The industry was composed primarily of small firms, estimated to number 70,000 (Silverstein 1993), each consisting of one or several trucks. Buntrock, over time, acquired several firms. He then proceeded with a deliberate strategy to build a national, publicly traded firm and succeeded in doing so. By the end of the eighties Waste Management was a firm with nearly $1 billion ($965 million in 1982) in revenues (Jacobson 1993).

Why was Buntrock able to succeed at this particular time? Why had not someone done the same thing earlier? In the next section, we will look at how the industry, technology, and the environment were changing at the time Waste Management was growing.

IV. **Industry Consolidation**

Between the end of World War II and the 1980's, the waste management industry changed in dramatic ways. Underlying much of the change was simply population growth, which rose from 132 million to 152 and on to 185 million in the 1940, 50 and 60 censuses (Alexander 1993). There was also a 20% increase in households between 1947 and 1960, and this growth contributed significantly to a growth in the amount of trash produced.  

Other changes, specific to the solid waste management industry, were also occurring. Although the changes are, in this section, discussed in two discrete sections, technology and regulatory, we will see later that in fact these two forces of change engaged in a dynamic interaction throughout the period.

Technology Changes

The changes in solid waste management technology were extensive in the post-war period, and included changes in all phases of the waste collection and disposal process.

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4 Interestingly, however, not in per capita production of garbage. Despite assumptions by many to the contrary, per capita production of waste has actually declined (by weight). Credit packaging improvements (Rathje & Murphy 1992).
A first simple change occurred in the area of commercial trash collection with the development of the “dumpster”, a large receptacle (originally 1 cubic yard) for use by commercial establishments instead of barrels. Instead of crews of several strong men lifting barrels, commercial waste collection could be done with a single driver in a vehicle that lifts and dumps the dumpster hydraulically. Later refinements included larger dumpsters, trucks that lift from the side, back and front (to accommodate tight alleyways), and “roll-on” dumpsters which allow 25 cubic yards of refuse or more to be collected at a site and then removed by transporting the entire dumpster. An example of a front-loader is provided in Exhibit 3-4.

Exhibit 3-4: Commercial trash dumpster

Perhaps the most important change in solid waste management practice in this period was the evolution from close-in dumps to remote sanitary landfills. While initially dumps were simply designated sites to accumulate garbage, in the post-war period several changes took place. First, dumps were moved further out from population centers, as suburbanization occurred and people wanted to be distanced from the odors and vermin associated with dumps. This simple change alone drove major changes in trash equipment, since the trip to the dumping location now required a long, often high-speed journey, consuming a sizable proportion of the total labor hours and introducing issues with loose debris and odors.

As a result of the relocation of dumps, the use of transfer stations emerged, allowing the loads from individual collection vehicles to be aggregated into tractor-trailer loads for transportation to the dump. Now, instead of using simple, open trucks for collection, haulers needed specialized, enclosed, large-capacity vehicles with on-board compaction capabilities. An example is provided in Exhibit 3-5 below.
The creation of the specialized collection vehicle was described in a 1976 article later cited in an industry journal:

The parameters of refuse trucks are indeed unique to the trucking industry. No other truck in any other industry must fulfill all the demands placed on the refuse chassis. These include the ability to operate on and off the road, the ability to operate economically both in the city and on the highway, the ability to operate under the most severe start/stop conditions, the ability to accommodate sophisticated power take-off equipment, and the ability to cope with a shifting center of gravity, both vertical and horizontal, which is an integrated part of the design of any refuse body (Waste Age 1999).

Compaction has been a continuing focus in modern solid waste management. When compacted on a typical 25-yard “mother hen” collection truck, waste is compacted to about 30% of its initial volume. While a cubic yard of waste picked up at the curb weighs about 100-150 pounds, a cubic yard delivered to the landfill or incinerator is 450 or more pounds. At the landfill, it is further compacted (through rolling operations with spiked and flat rollers) until a cubic yard at the landfill can be seven times the weight picked up at the curb, or as much as 1,300 pounds (Alexander 1993).

In addition to being located further from the populations they served, dumps in the post-war period incorporated a process used extensively in World War II, which involved compacting each the day’s deposits with heavy equipment and covering the day’s accumulation each night with a fresh cover of 6 inches of soil. This substantially reduced odors, problems with rats and

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5 So-named for the manner in which the truck grabs in the trash from the rear.
insects, and the tendency for loose material to be blown away. Dumps that were operated in this fashion were renamed "sanitary landfills," and many later refinements were made to the technology. These evolutionary changes included careful siting, the addition of liners at the base of the landfill, the use of drain pipes to direct the fluids that emanated from the trash, and the use of collection systems to capture and collect methane. The result of these technology changes is that a typical landfill in 1993 (80 acres, serving 500,000 people for 20 years) cost as much as $33 million to build, and $8 million to close at the end of its life (Silverstein 1993). The technology of a modern landfill is captured in the schematic in Exhibit 3-6.

Exhibit 3-6: Modern landfill technology
These three basic changes – the development of the dumpster and specialized collection vehicles, the relocation of dumping sites, and the emergence of landfill technology – created a changed environment for garbage collection and disposal firms. Suddenly, where previously an open truck, broom and shovel were all that was required to enter the business, now large capital outlays for specialized equipment and expertise were required. These changes alone may have been enough to enable the rapid emergence of larger firms in the field. In fact, however, these changes were accompanied by, and in fact one can argue caused by, substantial changes in the regulatory and public policy environment, which were the real drivers of change.

Regulatory Changes

Environmental awareness grew throughout the 1960’s, culminating with the first Earth Day in 1970. Not coincidentally, this year also saw the creation of the EPA. The first solid waste regulation, the Solid Waste Disposal Act of 1965, was also updated in 1970 as the Resource Recovery Act of 1970 (EPA).

A revision to that Act (later renamed The Resource Conservation and Recovery Act, or RCRA) required the use of sanitary landfill technology for all new dumping locations, and later refinements to the legislation required all open dumps to be closed. The result was, suddenly, an apparent shortage of landfill locations, and the departure of many municipalities from the role of operator. In addition, the permitting process for new landfills became a more technical process, requiring detailed site analysis and operating plans before approval. Small garbage haulers were suddenly faced with fewer dumping alternatives and higher “tipping” fees, while larger haulers that could afford to obtain sites and permitted landfills enjoyed a substantial advantage.

According to Judd Alexander in the book In Defense of Garbage:

The public perceives that the garbage crisis is caused by the runaway growth of disposables, packaging, and discards in general. The real problem, of course, is not the growth of garbage or the quantity of garbage; it is the closing of landfills and the failure to provide replacement sites... (Alexander 1993).

Further environmental regulation dictated regulations and processes for handling subclasses of wastes, including chemical and toxic wastes. Once again, the regulatory changes resulted in dramatic changes in the industry, because only well-capitalized firms could afford the process of creating or obtaining landfills licensed to receive toxic wastes.
From the period beginning in 1970, a steady stream of regulations emerged from Washington on all aspects of the management of solid waste. As we will discuss below, it is these regulatory changes that drove changes in technology, which in turn lead to industry consolidation.

**Consolidation Processes**

It is in this environment of rapid regulatory and technology change that the consolidation of the solid waste management industry and the creation of the agglomerates took place. Beginning in the early 1970's, two primary acquirers emerged, BrowningFerris and Waste Management Corporation. They each began rapid expansion through acquisition, and that trend has continued through to today. To give a sense of the pace of the roll-up activity, in a nine-month period in 1970 Waste Management purchased more than 133 firms. Today, instead of finding many small, family-run firms, the industry is dominated by several large, public corporations, including Waste Management, Browning Ferris, Laidlaw and Wheelebrator. In fact, Waste Management itself fell victim to the trend in 1998, when it was acquired by a smaller firm, USA Waste, who subsequently took the Waste Management name.

One result of the technology changes was a dramatic change in the costs to enter and compete in the solid waste management field. According to Michael Silverstein:

> All these kinds of advanced technology, of course, are too expensive for the smallish concerns that used to predominate in the waste management business. New technologies becoming available in this field increasingly favor players with deeper pockets (Silverstein 1993).

With the advent of federal regulation, the procurement of licensed landfills became a key competitive tactic in the 1970's. Much of the acquisition activity in this period actually relates to the obtaining of landfill capacity by the private haulers.

Silverstein (1993) also provides an interesting comparison to the gaming industry. In both the gambling and the waste industries, he notes, with regulation and oversight came a requirement for the adoption of accepted business practices, which tended to drive toward larger-scale businesses. Throughout the 1970's and 80's, the waste industry enjoyed high growth and profitability. For example, growth rates were in the 20 to 30% range throughout this period. Today, waste management accounts for an estimated $260 billion in spending by industry in the U.S., with another $30 billion spent by government. This amounts to 3% of GNP, with an estimated $27 billion in revenue in the solid waste management sub-sector.
The process used by Waste Management to grow was based on the use of a rapidly rising stock value to purchase small operators using stock. Using the “pooling of interests” accounting method, Waste was able to move very fast. For example, in 1971, they acquired more than 100 firms. Although many merger and acquisition activities lead to poor results, these acquisitions seem to work well. Perhaps the reasons for this include the fact that they were truly acquisitions, in that Waste Management completely took over the operation of a smaller firm in an identical business. This is unlike many “mergers,” in which firms from different industry segments (or entirely different industries!) are merged in attempt to capture additional value.

Value creation is, of course, the intent behind mergers and acquisition activities. In the case of Waste Management, substantial value (as measured by market capitalization) was created. In thinking about the source of that value, possible explanations include the imposition of professional management, the availability of capital to take advantage of opportunities unavailable to smaller firms, and the improved prospects for survivors in a rapidly growing business. While a detailed investigation into value creation is beyond our scope here, we do discuss the causes and effects of the consolidation that occurred in the waste management industry in the section below.

V. Outcome and Analysis

Looking at the consolidation that took place in the solid waste management industry, one can see a relationship between technology and changes in the industry structure. It seems obvious that the technology changes drove higher capital requirements, which in turn favored (perhaps required) the creation of larger firms with access to greater capital and with the ability to harness greater political power and technical expertise. So one is tempted to simply attribute the rapid consolidation of the industry to technology innovations.

That causal relationship would miss an important point, however. While technology may have been in the middle of the changes in the waste management industry, it appears that the root cause was the changed attitudes toward the environment. It was these changed attitudes, best exemplified by Earth Day in 1970, that lead to public policy and regulatory changes, which in turn created the requirement for technology changes. For example, while compactor trucks may have emerged on their own due to simple economics (fewer trips to the dump equals saved fuel and time), the massive changes in capital requirements were driven more by the environmental policies relating to landfill technology and hazardous waste management. It was
these changes that lead to wholesale changes in the skills and size required to compete in the solid waste management field.

This compares in an interesting way to other examples of disruptive technologies cited by Utterback and Christensen (1994, 1997). In the cases of ice, lighting and disk drives, it was a substantial improvement in the economic value proposition to customers and (eventually) the improved customer benefits of the new technology that lead to its adoption and the subsequent industry restructuring. While it is true that in the case of solid waste management improved technologies also yielded increased benefits, these benefits were not driven by market forces led by individual consumers. Instead, the technology changes in the waste field were accelerated by, and in some cases caused by, legislation changes. Without the accelerant of regulation, it is unclear whether the rate of technology change in the field would have been rapid enough to cause or support the rapid industry restructuring that actually took place.

That does not mean it would not have happened, of course, since the roll-up activity may have been driven by the egos of the consolidators and fueled by financiers targeting short term arbitrage gains. In the waste industry, however, it appears that there were fundamental changes associated with consolidation, and that the industry was restructured in a way that created advantages for larger competitors. Exhibit 3-7 summarizes some of the changes in market forces that accompanied the consolidation of the solid waste industry. As indicated in the table, perhaps the most significant change in this industry was in the barriers to entry area, in which changes in regulations and technologies dramatically changed the minimum efficient scale of operations.

**Exhibit 3-7: Changes in market forces in the consolidating solid waste industry**

<table>
<thead>
<tr>
<th>Market Force</th>
<th>Prior to Consolidation</th>
<th>Changes as a Result of Consolidation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer power</td>
<td>High</td>
<td>Still high but decreased</td>
</tr>
<tr>
<td>Supplier power</td>
<td>Moderate</td>
<td>Still moderate but decreased</td>
</tr>
<tr>
<td>Rivalry</td>
<td>High</td>
<td>Still high, slightly reduced</td>
</tr>
<tr>
<td>Barriers to entry</td>
<td>Extremely low</td>
<td>Increasing significantly due to regulatory and technology changes</td>
</tr>
<tr>
<td>Substitutes</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
VI. Summary

Technology changes clearly played an important role in setting the stage for Waste Management and others to use the roll-up strategy as part of the consolidation of their industry. The need for much more expensive collection and compaction equipment and the changes in landfill technology created high capital requirements, which the agglomerates could provide through rapidly appreciating public stock.

Looking more closely, however, one can see a pattern of change that can be traced from changing public attitudes towards the environment, to changes in the regulatory environment, which in turn made technology changes necessary. It was in this setting that consolidation occurred. While there were financial maneuvers involved, those maneuvers were supported by fundamental changes in the industry.

While many technology changes can be envisioned in the waste field, it appears unlikely that we will see such breakthroughs driven by consumers. The fact is that consumers simply want their garbage to disappear, and the less they are involved, the happier they are. Innovation in waste technology therefore is more likely to come from additional cycles of public concern followed by government regulation. In economic terms, the waste industry has a massive free rider problem, and unless that changes, further improvements in our waste management technologies will likely be driven by government, not led by consumers. As a result, industry change is more likely to occur as a result of disruptive regulation and adaptive technology rather than because of truly disruptive technologies.

A question for further investigation is whether the pattern of industry consolidation through roll-up, caused by underlying regulatory change and adaptive changes in the technology requiring greater capital, occurs in other industries and is a generalized pattern. For additional perspective, we look at two additional industries that have been the focus of roll-up activity in the next two chapters.
Chapter 4: Mixed Roll-up Results in the U.S. Funeral Home Industry

1. Introduction

The U.S. funeral home industry, part of what is now known as the "death care" industry, bears many of the signature characteristics of a market that is a candidate for the roll-up process. As in the case of the solid waste industry before consolidation, the funeral home industry was highly fragmented, with many small, family-run operators. And as in the case of solid waste, consolidation began in the 1960's and 70's when one successful and driven industry insider, Robert Waltrip, was able to implement his vision of how the industry could and would change.

Unlike the case in solid waste, however, the primary changes that enabled and accelerated consolidation in the funeral home industry were not related to regulation and technology. In this case, the opportunity resulted primarily from an insight in regard to operating models. That insight was simply that clusters of funeral homes could be operated more efficiently by sharing back-end services (embalming, hearses, etc...), thereby smoothing the peaks and valleys in utilization suffered by single-home operators.

This insight, proven on a regional basis, provided the catalyst for the creation of SCI, the largest consolidator and operator of funeral homes in the U.S. In building a national chain of funeral homes that shared services, garnered market power and implemented professional management, SCI was able to create a sustainable advantage that lead to long-term growth and profits. Unlike Waste Management, however, SCI proved unable to harness strategic control of additional parts of their value chain, and with intense competition from other consolidators such as Canada-based Loewen Group beginning in the late 1980's, SCI ultimately stumbled financially.

Like the solid waste industry, there appeared to be fundamental and strategically sound reasons driving consolidation in the funeral home industry. In this case, the minimum efficient scale of operation evolved to be based on a cluster of funeral homes sharing services. And as in the case of solid waste, public attitudes and regulation played a role in changing industry structure. Despite these foundations, however, consolidation in this industry ultimately failed to deliver sustainable advantage to the consolidators. The possible reasons for this include execution failures including diversification attempts, excesses in bidding for target businesses
due to intense competition among the consolidators, or perhaps because the consolidation process evolved over time to be driven by, and focused on, financial engineering rather than strategic and operating imperatives.

II. Industry Background and Structure

The manner of attending to the dead and their survivors is a major aspect of every culture, and modern western and U.S. society is no exception. In addition to being important from a religious and social perspective, however, "death care" as the industry is now known, has grown into a very big business, with total industry revenues estimated as high as $25 billion (Horn 1998). In addition to becoming big business, our funerary practices in this country have also evolved a great deal since colonial times.

American Funeral Practices and Industry Development

In our earlier history, death was more closely integrated into everyday life. Mortality rates were high, life expectancy was short, and infant mortality was extremely common. In addition, the lack of mortuary techniques created an urgency to have human remains move promptly from deathbed to grave. In this environment, the death care industry essentially comprised a single element, the undertaker, whose primary purpose was the provision of a coffin.

Coffins were generally wood, and their production, sale and delivery was a sideline, not a primary business, for carpenters and cabinetmakers. What services were delivered were usually conducted by a religious official.

Over time, the death care business expanded to include transportation, logistics and event planning, and with this change, which occurred during the first half of the 1800’s, the term undertaker gave way to the term funeral director. Unlike their undertaker predecessors, funeral directors defined their trade as a full-time, full-service business, not a side-line product business centered on the provisioning of coffins.

With the expansion of services and the changes in terminology, increased specialization in the industry occurred. Evidence of that specialization was the emergence of specially-made "caskets" at the expense of simple coffins, and the development of specialized vehicles (though it is interesting to note that early motorized hearses tended to do double-duty as ambulances, a fact that may not have been reassuring to patients but did improve utilization of a capital asset). Some authors correlate the emergence of specialization in these areas with a growing
romanticism of death in the nineteenth century as "less acceptable than had previously been the case. The living demanded that its harsh reality be reduced, muted and beautified" (Keller and O’Kane 1999, p. 6). Additional terminology changes have occurred over the years which reflect these attitude changes and are listed in Exhibit 4-1:⁶

**Exhibit 4-1: Evolving industry terminology**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Consolidator(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undertaker</td>
<td>Mortician, Funeral Director</td>
</tr>
<tr>
<td>Coffin</td>
<td>Casket</td>
</tr>
<tr>
<td>Hearse</td>
<td>Coaches, professional Cars</td>
</tr>
<tr>
<td>Flowers</td>
<td>Floral Tributes</td>
</tr>
<tr>
<td>Corpse, body</td>
<td>&quot;Loved one&quot;, or &quot;Mr. Jones&quot;</td>
</tr>
<tr>
<td>Ashes</td>
<td>Cremains</td>
</tr>
<tr>
<td>Retort, crematory</td>
<td>Cremation chamber</td>
</tr>
<tr>
<td>Consolation</td>
<td>Grief therapy</td>
</tr>
<tr>
<td>Casket Room</td>
<td>Display room, selection room</td>
</tr>
<tr>
<td>Digging grave</td>
<td>Opening interment space</td>
</tr>
<tr>
<td>Filling the grave</td>
<td>Closing interment space</td>
</tr>
<tr>
<td>Grave</td>
<td>Interment space</td>
</tr>
<tr>
<td>Funeral parlor</td>
<td>Funeral home, chapel</td>
</tr>
</tbody>
</table>

With the changes in attitudes toward death and the funeral process that occurred in the late 1800's and into the 1900's, funeral directors began to organize and advocate increased professionalism. Their goal was to elevate the profession to that of doctors, lawyers and accountants. The National Funeral Directors Association (NFDA), the pre-eminent trade organization today, was formed in 1882, and had significant success in gaining various controls over their industry, including training and licensing requirements. These successful moves towards a more professional standing, while purportedly to increase the level of services, of

⁶ These examples of funeral industry terminology are taken largely from *The American Way of Death Revisited*, by Jessica Mitford (Mitford 1998).
course had another primary effect, which was to control entry into the profession and increase coordination among competitors. According to two historians of SCI, the largest firm in the funeral home business:

The NFDA had most success at controlling competitive practices within the industry. By the mid-twentieth century, the organization was serving as a protective bulwark against all forms of competition that would threaten the status quo (Keller and Kane 1999, p.48).

The reduced competition that resulted foreshadows regulatory changes that occurred later in the 1900's which, along with fundamental elements of the industry structure, set the stage for consolidation of the industry that began in the 1960's.

*Industry Structure before Consolidation*

In the 1950's and 60's, just prior to the initial wave of consolidation driven by SCI, the funeral home market had most of the attributes that we associated with industries targeted for roll-up in Chapter 2.

There were about 22,000 funeral homes, most of which were single-location operations owned privately by families. Many of these families were faced with the problem of succession and how to leverage their business as the owners aged; not all children of funeral directors were favorably disposed toward entering the funeral business. These characteristics are similar to those that were in place in the U.S. solid waste management industry prior to consolidation.

There were key differences in the funeral industry, however. Among these were:

- The funeral home industry was more organized. A professional trade group had existed for years, and had striven to elevate the industry to the status of a profession, with at least some success. The result was limited competition and limited entry.

- The funeral business was growing less dramatically. Growth in the industry is sensitive to two key drivers, the pattern of population growth in the country and the death rate, as measured in death per 1000 in the population. In the first area, the industry could look forward to only moderate population growth, but did enjoy the prospect of an increasingly aged population as the baby boom generation aged in the long term. On the other hand, death rates, calculated as death per thousand each year, had been steadily declining. The net result is that the funeral home business was a slow-growth industry with uncertain growth prospects in the near term.
• The funeral home industry had a more complicated value chain and industry structure than the waste industry. Beyond funeral homes, there are other participants in the industry. In fact, the death care industry has several overlapping and, at times, competing value chains.

• The funeral home had a more significant issue in regard to public perception of the industry. While garbage haulers may not have been at the top of the social order, funeral directors have long been held in especially low esteem.

In regard to the last point, the public perception of the industry appeared to be validated in 1963, when Jessica Mitford first published her book The American Way of Death. An expose of the often obnoxious practices of the industry, this book enjoyed popular and critical acclaim and led to many articles and discussions about the trade through the 1960's. Ultimately, it set the stage for formal federal regulation in the form of The Funeral Rule, a trade rule first implemented by the Federal Trade Commission in 1984.

From a market forces perspective, the funeral home industry shares most of the traits of other industries that have been the focus of consolidation. Like those industries, funeral homes had a lot of rivalry among many small operators. And like those other fragmented industries, the funeral home operators had relatively little market power in regard to their suppliers. Casket manufacturers, in particular, had a significant amount of control over funeral operators due to entangling credit arrangements for casket inventories.

In the funeral home industry, customers had somewhat less power than those in the waste industry, for example, because of limited competition within a geography and limited socially accepted alternatives to traditional funerals. As a result of these limitations, consumers have regularly organized cooperatives and other organizations to promote alternatives to traditional funerals such as cremation or donation of bodies to medical science, but these substitutes were not yet widely available or generally socially acceptable in the period prior to consolidation.

Barriers to entry were moderate to high. On the one hand, the business requires only a limited capital equipment, and the assets, for the most part, are not specialized. The minimum

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7 Republished as The American Way of Death Revisited in 1999.
8 In Andover, MA a former funeral home is now a successful restaurant (Palmers), illustrating the point
efficient scale appeared to be fairly low, consisting at that time of a single funeral home. On the other hand, the fact that buying decisions are made by grieving relatives does make entry a challenge for newcomers without an established reputation, and the training and licensing requirements imposed through state regulations give the industry a significant degree of control on new entrants.

A summary of Porter's five forces as they relate to the funeral home industry prior to the beginning of industry consolidation, in the period of the 1950's and 60's, is provided in Exhibit 4-2 below.

**Exhibit 4-2: Market forces in the funeral industry prior to consolidation**

<table>
<thead>
<tr>
<th>Market Force</th>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer power</td>
<td>Low. Consumers are in great need have limited choices within a geography, little information.</td>
</tr>
<tr>
<td>Supplier power</td>
<td>High. Suppliers such as casket manufacturers were larger concerns and had established a level of strategic control over funeral homes through credit arrangements.</td>
</tr>
<tr>
<td>Rivalry</td>
<td>Moderate. Many rivals, but muted competition due to geographic nature of the business and industry trade practices.</td>
</tr>
<tr>
<td>Barriers to entry</td>
<td>Moderate. Low capital requirements but difficult to enter markets where established incumbents have gained the confidence of the consumer.</td>
</tr>
<tr>
<td>Substitutes</td>
<td>Few. Although some alternatives to the traditional funeral service had begun to emerge, including direct cremation and consumer cooperatives, most people felt they required the services of a funeral director to properly manage the after-death process.</td>
</tr>
</tbody>
</table>

Oster's extensions to Porter's five forces industry model include two additional elements of analysis, including government and history (Oster 1999, p.47). In regard to government, in the period prior to the start of consolidation the impact was felt primarily as limitations on entry as described above, due to licensing requirements. The effect of history on the industry was the fact that an established funerary practice in the U.S. had evolved, characterized by (typically) open casket services and cemetery burial.

that the primary asset of a funeral home is not excessively specific.
III. Early Consolidation and Service Corporation International (SCI)

Today, the three largest competitors in the funeral home industry are Service Corporation International (SCI), Loewen Group, and Stewart Industries. Founded in 1962, SCI is now the largest death industry company in the world and their early history illustrates the first phase of roll-up activity and the development of the modern death care industry.

In 1962, R.L. Waltrip founded the antecedent corporation to SCI, Southern Capital. Born into the funeral home industry in Houston, Waltrip formed Southern Capital expressly to enact a vision that he had for changing the operating model for funeral homes from a stand-alone concept to a clustering model. With clustering, back-end services ranging from embalming services to the use of vehicles could be shared across the operations of several funeral homes, thus leveling the demand for those services and significantly reducing costs.

Waltrip proved the concept in Houston through the addition of two funeral homes to his family's operation in Houston. According to Waltrip, "as I started doing it and saw that it could work, I started gaining confidence, knowing myself... that this could be done" (Keller & O'Kane 1999, p.46). He then refined the concept, determining that combinations of several funeral homes with one larger operation worked best. Ultimately, he formed Southern Capital to further implement his vision, and the name reflects one of his most significant concerns, which was securing capital to complete acquisitions. He knew that, given the low esteem in which the profession was held, that could be his largest hurdle.

After initial early successes in expansion into Texas and across the south, the firm gathered momentum as an acquirer, changed names to Service Corporation International, and went public. The initial IPO was in 1969 on the over-the-counter market, but within a few years the firm's stock was trading on the New York Stock Exchange.

Patterns and Processes of Consolidation

Through the evolution of the company, several patterns revealed themselves. In some of these patterns, striking similarities to the Waste Management story can be seen. For instance, like early waste service providers, funeral homes tended to be family-run businesses and were therefore susceptible to offers for purchase during inter-generation succession. When children were not interested in taking over the family business, selling became an important option for aging operators. Of course, selling the family business could be a very hard decision, but as with Dean Buntrock at Waste Management, the fact that R.L. Waltrip had come up from within the business helped to make the decision easier and helped "allay concerns about the
ultimate fate of their mortuary after they sold it" (Keller & O'Kane 1999, p.76).

Another parallel pattern was in the manner in which SCI operated for several years as a private company, struggling to finance its initial acquisitions. In this early phase, several SCI acquisitions were actually financed by the sellers. Upon going public, however, SCI was able to use its stock as currency to finance continued acquisitions. According to the authors of SCI's corporate history, this purchasing power "brought a dizzying new era of expansion and growth to SCI" (Keller & O'Kane 1999, p.87).

Another familiar pattern was a commitment to decentralized management and organizational structure created by SCI. Although the design of the operating model was in many ways a "cookie cutter" approach, the actual day-to-day operation was set up as a series of operating regions with little day-to-day operating control from corporate headquarters. In 1973 management divided the funeral homes into three regions, and that number had grown to six by 1982.

Some patterns in the SCI consolidation model were unique to the funeral home industry. The first was the pattern of acquiring businesses in logical groupings to allow the implementation of the clustering approach, along with professional management, accounting systems and controls. Another pattern, learned from a mistake made in SCI's first acquisition outside of Houston, was the retention of the acquired firm's name and, preferably, the owners. Changing a funeral home's name could undermine, if not completely destroy, the reputation of the establishment. Thus, acquisitions were made discretely, and the changes made were on the back-end, not the customer-facing part of the business.

Still another notable pattern in the early SCI history was the targeting of "heritage firms," that is, very well known and established firms in targeted cities. These firms were generally more secure and better managed, and therefore could serve as the cores for new clusters as well as establishing the reputation of SCI in a new market.

Failed Attempts at Vertical Expansion

In addition to aggressive horizontal expansion, at several points in its evolution, SCI explored expansion and acquisitions in the vertical direction. In this one sees a potential pattern similar to the move by Waste Management Corporation into landfills. As early as 1966, for example, they purchased a firm which supplied and leased funeral vehicles. And early in their history they began to acquire and operate cemeteries as well as funeral homes, a move which helped to eliminate a source of competition and allow them to capture more of the value of the
funeral process. Other vertical expansion ventures at a later stage of the company did not turn out well, however.

In the 1970's and 80's, for example, SCI expanded into the flower business, acquiring and opening 74 shops, both in their funeral homes and as stand-alone businesses. In addition, the firm entered into the "pre-need" insurance business aggressively, which involves the pre-selling of funeral services and burial plots. From there the firm expanded into additional areas, buying companies that produced bronze memorial markers and concrete burial vaults.

Ultimately, these vertical expansion activities lead SCI to attempt to gain control of their supply of caskets, which was one of their key supply dependencies. Over time, casket companies had become quite powerful in the market, controlling their prices and establishing credit dependencies with many funeral home businesses. SCI entered the business to gain control of its own casket supply through a stock-based acquisition of Amedco in 1987. The net results of these attempts at vertical expansion, however, was the ultimate divestiture of the pre-need and casket businesses and the closing of the flower business in 1989, with a message from the company that it planned to "concentrate further on expansion within its core lines of business" (SCI 1989 Annual Report).

The End of the Early Consolidation Phase

SCI's position as a consolidator can essentially be seem as having occurred in two phases, the first extending from 1962 through 1981, when SCI purchased their primary competitor (IFS), the only other aggressive consolidator operating at the time. The IFS deal resulted in the addition of 91 funeral homes and 22 cemeteries and the establishment of SCI as sole owner of the corporate funeral home space. The effect of their early consolidation strategy can be seen in Exhibit 4-3.

Exhibit 4-3: SCI growth

SCI's second acquisition phase came about with the emergence of new competitors, particularly Stewart Industries and Loewen Group, in the 1980's, and is still underway today. The second phase of industry consolidation proved to be far different from the first, and
ultimately lead to significant damage to SCI as well as their new competitors.

IV. **Roll-up Wars: The Arrival of Loewen Group and Other Competitors**

Loewen Group is a younger entrant into the funeral home industry, and its evolution illustrates the patterns and processes of the second phase of industry consolidation, which has been characterized by aggressive competition among competing consolidators.

Loewen Group is a Canadian firm that was started by Ray Loewen, who like R.L. Waltrip, was born into the business. He inherited responsibility for his family's funeral home in 1961, and completed several acquisitions by 1969. By 1975 he owned 14, but then took a short path into politics and ultimately expanded into real estate and other ventures, sidelines which lead to a failure of his business in the early 1980's. He reentered the funeral home business in 1983 as an acquirer and consolidator, initially using various bank credit mechanisms to complete a series of acquisitions and then going public in 1987 "to raise capital for growth." (Schreiner 1999).

Following its IPO, Loewen Group embarked on an extremely aggressive acquisition strategy. The firm ended 1988 with 103 funeral homes but ultimately grew to own or operate 1,100 funeral homes and 500 cemeteries. During this period an intense competition for acquisitions emerged with SCI, the market leader which was about three times its size. One industry observer noted that "At the height of the frenzy, Loewen and SCI between them accounted for almost three quarters of all the funeral home acquisitions in North America." By 1996, the firm had developed the reputation for paying "far too much for the funeral properties it was snatching from under SCI's nose" (Schreiner 1999).

A representative situation occurred in July 1996, when Loewen was able to secure the purchase of a chain with 146 funeral homes, followed in September by another win by Loewen as they outbid SCI for the largest U.S. cemetery operator. These bidding outcomes resulted in a hostile takeover attempt by SCI of Loewen in 1996, an attempt that was characterized by one analyst as an attempt to remove a "volatile and hostile bidder for death care properties from the market place." (Schreiner 1999). The takeover attempt failed, however, in the face of bitter contention between the principles of the two firms. In a release at the time, SCI blamed

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9 124 of those funeral homes were sold in April 1999 to reduce debt.
"defensive actions taken by Loewen and the revelation of financial details...concerning the company's recent transaction," a reference to the transactions noted above (Constantineau 1997).

Meanwhile, SCI was engaged in its own aggressive growth through acquisition. The firm quadrupled in size between 1992 and 1997 under the direction of L. William Heilinbrodt as President (Waltrip remained in place as Chairman), and their growth included a move into international expansion that included significant acquisitions in Australia and Britain.

The activities of both these competitors bring into focus patterns and processes of aggressive, competitive consolidation that characterized the later phase of the roll-up of the funeral industry. The question that is framed, however, is whether acquisitions in this phase of consolidation represented sound strategies based on attempts to capture competitive advantages, or whether the pattern had begun to feed off its own financial mechanisms and the egos of the CEOs involved.

During the latter phase of the roll-up war, another pattern begins to emerge, in which the primary consolidators are no longer acquiring single funeral homes, instead focusing on roll-up chains themselves. In this we see the full articulation of the Pac-Man strategy, in which there is a rapid feeding frenzy and the buyer one day is the target of a acquirer the next.

There is clearly money to be made in this environment. In an article entitled "Venture Fund Makes A Killing In Funeral Biz," Alan Wolf describes the financial maneuvering of Golder Thoma Cressey Rauner Inc., (GTCR) a Chicago firm that specializes in roll-up investments. In summarizing GTCR's achievement, Wolf explains that:

GTCR recently agreed to sell Prime Succession Inc. to Canadian Funeral Home services giant Loewen Group...for about $295 million, roughly five times what they spent to buy 40 mortuary businesses since it was founded in 1991. In quickly creating the world's fifth largest funeral service company, GTCR employed its familiar pattern of acquiring and growing in preparation for selling (Wolf 1996).

This type of financial engineering is at the root of what seemed to drive the latter phase of consolidation in the funeral home industry. In fact, Prime Succession was the second venture by GTCR in the funeral home industry. Previously, they had created a company called Paragon, which also completed a series of acquisitions and then was sold. And even after completing the sale of their second venture, GTCR was contemplating doing it again, for a third time. Another GTCR principle summarized this thinking by commenting "If the right opportunity
presents itself, we'll get in at least one more time" (Wolf 1996).

In this model, with consolidation well underway and easily observable, investment firms can rapidly engineer deals and realize a profit based simply on providing an aggregation function for the major consolidators. In other words, the value created by such intermediate consolidators appears to be simply a bundling function that reduces the time and energy needed by the consolidators to identify and acquire individual firms in a series of transactions. The actual operating improvements or strategic benefits created by the intermediary consolidator are not clear.

The danger in this environment relates to the effects of supply and demand in regard to the targeted businesses. With intermediary consolidators joining the fray along with the larger roll-ups, prices for firms get bid up. Indeed, GTCR curtailed their first venture into the funeral home space for that very reason. According to Rauner, the principal behind GTCR's funeral home ventures, they ended their first play in the market when "private funeral homes were getting too expensive" and reentered the market when it had "cooled down enough" (Wolf 1996). Further evidence of the supply and demand effect on funeral home prices can be seen by the fact that after SCI and Loewen aborted their acquisition strategies, "funeral home valuations have plunged" (Schreiner 1999).

The issue of supply and demand of acquisition targets seems to emerge as a key issue in how analysts and consolidators look at roll-up markets as they intensify. When SCI acquired the fourth-largest publicly-held consolidator, ECI, in 1998, a primary effect expected by Daniel Isard, a funeral home industry analyst, was a significant change in supply and demand. In 1998 he observed that "...it dries up the potential buyers and reduces the values to be paid. The fewer people attending an auction, the lower the ultimate sale price" (Business Wire, 1998). In this comment we can see the degree to which the focus is on internal market economics relating to supply and demand of acquisition targets and not on the question of creating value for customers and competitive advantages for industry contenders.

The net result of this pattern of rapid consolidation is, of course, good for those who still control the object of desire, the small independent funeral home. One analyst commented on that aspect of the phenomenon by remarking that "with all these companies coming in and gobbling up each other, the independents are probably smiling all the way to the bank" (Wolf 1996). The ultimate result for the companies doing the gobbling, however, may not be so positive.
In a 1999 article entitled "A Mutually Destructive Rivalry," John Schreiner describes the state of the industry in a National Post article. As we turn to the state of the industry today, his opening sentences provide a powerful summary of the net results of the latter stage of competitive consolidation in the funeral industry.

The race between Loewen Group and Service Corporation International to snap up funeral industry assets turned into a disastrous bidding war. Loewen is a financial mess, SCI's shares have plunged, and the men who ran the two firms have been shown the door (Schreiner 1999).

V. Outcome and Analysis

By October 1999, according to USA Today, the funeral industry was struggling from "falling profit margins, constant death rates and competition from low-cost cremations and online discounter of caskets" (Willing 1999). This result came about from the manner in which consolidation occurred over the last ten years, in which the roll-up strategy appeared to be a result of momentum and financial maneuvering rather than an attempt to create fundamental competitive advantages.

Today, estimates of the size of death care industry revenues range from $12 billion to $25 billion, depending on what's included and who is doing the counting.\textsuperscript{10} The number of funeral homes remains remarkably stable at about 23,000 which employ over 100,000 (U.S. Economic Census 1997). The general consensus seems to be that about 15% of the industry is consolidated, based on number of locations. Based on revenue and profits, the figure is higher, since the consolidators are more profitable.

An analysis of how the industry has changed as a result of consolidation starts with a summary of some of the notable trends that are impacting the industry.

- Prices have increased substantially over the years. For most Americans, their funeral will be their third most expensive purchase, with an average cost in 1997 of $4,600, and the average cost of a funeral provided by a corporately-owned establishment approximately $6,000.

\textsuperscript{10} The U.S. Economic Census of 1997 put the figure for NAIC Code 8122 (Death Care) at $13 billion. U.S. News included an estimate of $25 million in a 1998 article on the industry, and Karen Leopold, a vocal advocate for consumers, recently cited $17 billion as the current industry size.
• Cremation is an increasingly popular choice in America. In 1997, the Cremation Association of North America (CANA) expected cremations to rise from 22% to 29% by 2010. Forbes predicted 40% by 2010. According to the National Funeral Directors Association, in 1998 the figure was 24%. The growth in cremation as a selected alternative is illustrated in Exhibit 4-4.

• Death rates have been gradually lowering, but large increases are anticipated as the baby boom generation ages. There were 2,338,070 deaths in 1998, or 8.65 per thousand (NFDA web site).\textsuperscript{11} There is a forecast of a twofold increase in the next 40 to 50 years as boomers age. The long term trend is captured in Exhibit 4-5.

The combination of these factors suggested to some industry analysts a positive outlook as recently as 1997. They cited consistent price increases averaging 4.3% a year, a death rate increasing at .8% a year, and population growth of .9% (MarketData). In fact, the large public consolidators have virtually collapsed since those optimistic forecasts.

For example, SCI lost 80% of its share data in 1999. In their announcement at the time,
the firm blamed a declining death rate. At least one commentator, however, sees SCI as "suffering the consequences of acquiring too many funeral homes" (Serju-Harris 1999). In 1998, Loewen Group, having experienced sizable losses and faced with pressures from creditors, filed for bankruptcy. And both firms fired their leaders.

Five Forces Analysis

When looked at through the five forces lens, the changes that occurred in the funeral home industry through consolidation are somewhat less dramatic than those in the waste industry. Rivalry has remained at the same moderate level, with about the same number of competing outlets. As summarized in Exhibit 4-6, most of the forces had only small changes. While the consolidation of the funeral homes did increase the market power of the consolidating firms, the changes in these areas are not substantial. They did not gain substantial power at the expense of their customers, though those customers did lose some degree of choice, resulting in higher funeral process in general and the ability of the corporate funeral homes to charge higher prices. The gain in power over suppliers was not substantial either, and attempts by the consolidators to substantially gain control over those suppliers was limited, with success on the cemetery side but failure on the casket and supply area.

While they did not gain significantly at the expense of buyers and sellers, the prospects for growth in the funeral home industry is diminished by the growth of substitutes. The most notable of these is cremation, a change which has lead funeral homes to add cremation services to their repertoire. The emergence of retail and on-line casket sellers also pose as a substitute to the traditional services of the funeral home.
### Exhibit 4-6: Changes in market forces in the consolidated funeral home industry

<table>
<thead>
<tr>
<th>Market Force</th>
<th>Prior to Consolidation</th>
<th>Changes as a Result of Consolidation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer power</td>
<td>High</td>
<td>Still high but decreased</td>
</tr>
<tr>
<td>Supplier power</td>
<td>Moderate</td>
<td>Still moderate</td>
</tr>
<tr>
<td>Rivalry</td>
<td>Moderate</td>
<td>Still moderate, slightly reduced due to reduction in firms through consolidation.</td>
</tr>
<tr>
<td>Barriers to Entry</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Substitutes</td>
<td>None</td>
<td>Several and increasing, with cremation and retail funeral products</td>
</tr>
</tbody>
</table>

**Regulation**

One area of significant impact that has changed during the era of consolidation is the regulatory environment. Although there was antitrust activity in the 1970's, no significant alteration in the industry environment occurred in that area. However, after the American Way of Death was published in 1963, a growing number of consumer advocates and critics of the funeral industry emerged. Through a steady stream of articles, they illuminated many unethical industry practices, such as falsely informing customers of the need for embalming or requiring high-priced caskets to be used even in the case of cremation. The exposure of these abuses signaled the failure of the attempt by the funeral industry to elevate itself to professional status, and with that failure came the removal of the trappings of professionalism such as self-regulation and the imposition of federal regulation.

The Funeral Rule was adopted and implemented by the U.S. Federal Trade Commission in 1984. The intent of the rule was to explicitly prevent funeral directors from dishonest practices and to force them to provide accurate pricing information to their customers. The basic provisions of the Funeral Rule are provided in Exhibit 4-7. The rule was amended and extended in 1994, and is currently again being discussed on Capital Hill.\(^{12}\)

\(^{12}\) The U.S. Special Committee on Aging is holding hearings on funeral regulation as of this writing.
### Exhibit 4-7: Basic provisions of the funeral rule

<table>
<thead>
<tr>
<th>Topic</th>
<th>Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone price disclosures</td>
<td>Funeral providers must provide prices over the telephone</td>
</tr>
<tr>
<td>General price list available</td>
<td>Funeral providers must provide an itemized price list upon request</td>
</tr>
<tr>
<td>Embalming information</td>
<td>Information regarding embalming must be accurate, and funeral providers cannot falsely state that embalming is required by law and must specifically disclose that it is NOT required, nor may they charge for unauthorized embalming</td>
</tr>
<tr>
<td>Cremation information</td>
<td>Providers cannot falsely state that a casket is required for cremation, and must provide alternative containers for those requesting direct cremation</td>
</tr>
<tr>
<td>No bundling, ability to buy goods elsewhere</td>
<td>Providers cannot force you to use their products or charge a fee for handling caskets procured elsewhere</td>
</tr>
<tr>
<td>Itemized statement</td>
<td>All items that will be included in the ultimate price of the funeral must be disclosed on an itemized statement</td>
</tr>
<tr>
<td>Preservative claims</td>
<td>Providers cannot claim that embalming or other practices will preserve a body indefinitely</td>
</tr>
</tbody>
</table>

Source: U.S. Federal Trade Commission Web site

The effect of the implementation of federal regulation was essentially to create an opportunity for the consolidators. With the loss of professional status and the ability to self-regulate, the path to increased competition was opened and firms like SCI and Loewen were able to move into the once-protected territory.

Meanwhile, the regulatory field continues to be active. The NFDA, attempting to regain some control of their industry, has established a Washington, D.C. office and in 1995 proposed self-certification and training programs, which were accepted and implemented by the FTC. In the FTC's perspective,

NFDA's action represents a turn of events in the Commission's relationship with the funeral services industry. The NFDA had more characteristically been opposing the Commission in rulemaking proceedings or litigation rather than assisting the Commission to promote compliance with the Federal Rule. (U.S. Senate 1996).

As the relationship between the NFDA and the FTC shifts, the regulatory environment is becoming a key playing field for other competitors as well. Recently, independent and on-line casket retailers and funeral products sellers have petitioned for increased enforcement of the
Funeral Rule, which requires funeral directors to handle their products with no added fees. Of course, funeral directors are fighting back, trying to repeal that portion of the regulation (Willing 1999).

**Secondary Effects of Consolidation**

The consolidation of the funeral industry had several secondary results. One result was continued interest in and growth of consumer-based memorial services, organizations that were created to increase public awareness of funeral practices and to provide alternatives to traditional funeral home practices. This attempt to increase buyer power through information and the establishment of substitutes illustrates the degree of control of the industry that funeral directors had traditionally had.

Another result was the creation of various consortia of independent funeral homes. Faced with the cost advantages enjoyed by the larger chains, independent firms have attempted to harness greater purchasing power for themselves.

One of the first of these was actually an attempt by SCI in the 1970's to enter the funeral products distribution business through the formation of a separate subsidiary, International Funeral Associates, which was set up as a member organization for independent funeral homes. This was as part of one of the firm's vertical expansion forays, with the hope that they could gather even greater purchasing power for themselves and seize increased control of their suppliers. The attempt failed, however, as competing independent funeral directors refused to join the buying group for fear of adding to SCI's power and profits. Buying groups have emerged from time to time since; the Akron Beacon Journal reported in 1998 that "some black-owned funeral homes have initiated collective buying programs and are sharing vehicles and facilities to ward off competition" (Payne 1998). And a recent article in The Director, the house organ of the NFDA, is entitled "Cooperatives, the Wave of the Future" (Rosenacker 1999).

**VI. Summary**

After the first period of consolidation, SCI had established a successful record as a publicly traded company enjoying a period of sustained growth. The cause of the poor results for the large consolidators in the second phase of consolidation appears to be a result of the intensely competitive nature of that period of the roll-up.

As described previously, in this period many entrants came into the market with the express purpose of completing acquisitions in order to participate in the short-term financial
benefits of the roll-up phenomenon. Acquisitions were increasingly of already-consolidated
groups of homes, and there was increasing competition for the remaining attractive targets.

The focus of the consolidation activity appeared to have fundamentally shifted away
from acquiring funeral homes in order to implement the clustering concept and therefore realize
economies of a multi-unit geographical model. Instead consolidation seemed to be proceeding
under its own momentum, or perhaps with fuel in the form of the egos of the individuals leading
the consolidators, or the need for growth of the publicly traded companies.

This last point, relating to the dynamics of publicly traded companies, may provide a clue
to the underlying difference between the success of the first phase of the consolidation and the second. And that may relate to the issues of economies of scale, diseconomies of scale, and
minimum efficient scale.

The clustering concept essentially changed the minimum efficient scale of a funeral
home operation to a local, geographically anchored cluster. In the early consolidation phase,
this change is what delivered significant improvements to SCI. The clustering concept and its
increased sophistication also brought a need for better financial and logistical management.
The early phase of consolidation was focused on harvesting this advantage, and the use of
public stock as an acquisition currency provided the necessary capital to drive the consolidation.

In the later phases of consolidation, consolidators were acquiring chains of firms that
were already consolidated, many having already realized the benefits of clustering. The
advantage of additional size was therefore incremental, not fundamental. And with the
significantly larger size of acquisitions came greater integration costs and, ultimately, some
diseconomies of scale as coordination and integration efforts sapped more of the effort of the
firm. The fact that by this stage the firms doing the consolidating were very large, publicly
traded firms that had to deliver growth to their shareholders may have been driving the
acquisitions more than a fundamental attempt to gain strategic advantages.

In summary, in the latter phase of consolidation, several factors were at work which
caused consolidation to be a less effective strategy. Chief among these were the economics
cased by the increased demand for acquisitions, which fueled acquisition costs, and the fact
that the consolidation was no longer driven by the fundamental strategic advantage provided by
clustering. Once the process was driven more by short-term financial dynamics, the
consolidation was unable to sustain itself beyond its ability to deliver short-term financial results.
Chapter 5: The Poof Model and The U.S. Landscape Maintenance Industry

I. Introduction

In the previous two chapters, we have seen two versions of rapid industry consolidation, each based on the roll-up model. In Chapter 3 we saw how the U.S. solid waste industry was rapidly consolidated by Waste Management and others, and we identified technology and regulatory changes as both catalysts and strategic rationales. In Chapter 4, the story of the roll-up of the funeral home industry had similar elements, with a first phase of consolidation based on a new operating model (clustering) and a concomitant change in minimum efficient scale. The second phase of the consolidation of the funeral industry, however, appeared to be more characterized by financial engineering and investment objectives than by long-term strategic objectives. The recent history of the roll-up of the landscape maintenance industry told in this chapter picks up where the funeral story leaves off. This is an example of a modern roll-up driven primarily by investors for financial reasons, not incumbents for strategic reasons.

Compared to the previous examples, the history of consolidation in the landscape maintenance industry is much shorter. Aggressive consolidation in the roll-up model essentially began in 1998, with the formation of LandCare USA and acquisition moves by ServiceMaster through their TruGreen ChemLawn division. The patterns and processes used, especially by LandCare USA, illustrate the characteristics of the modern roll-up, using very rapid acquisition concurrent with the creation of a public corporation as the consolidation vehicle. This is the “poof” company concept introduced in Chapter 2, a concept practiced in several industries by Notre Capital Ventures, the motivating force behind LandCare USA.

As we will see, the basic industry characteristics of landscape maintenance are similar to the characteristics of other industries that have been the target of consolidators. This too is a fragmented service delivery business characterized by owner-operators and family-run businesses. Unlike the other industries profiled, however, it is harder to identify the basic strategic drivers underlying the consolidation.

The results of consolidation in the landscape maintenance industry are somewhat difficult to discern, given the fact that the process is young and still underway. The results are also obscured by the fact that roll-ups in general have became extremely unpopular on Wall Street, resulting in poor stock performance for most such ventures. None-the-less, it appears
as though the consolidation of this industry may not be proceeding smoothly, a result that may be at least partially attributable to the lack of sound strategic underpinnings for the restructuring that is occurring.

II. Industry Background and Structure

The "Green" industry is generally estimated at $100 billion dollars in total revenue, and consists of all types of outdoor lawn, horticulture, tree and property maintenance. The lawn and landscape service component of the industry is a $61 billion business (West and Wisniewski 1999).

There are more than 70,000 businesses competing in this market, and they employ more than 800,000 people. The industry is very fragmented, with most (approximately 70%) of the service providers being independent, privately held local operators who generate less than $500,000 in annual sales. 40% have three or less year-round employees, but the service providers run the gamut from neighborhood kids to small enterprises (three to four people) to multi-million dollar franchises. Concentration is extremely low. The top five firms are estimated to account for $2.2 billion in revenue, or about 4% of the industry total (Exhibit 5-1).

Exhibit 5-1: Revenue of Top Five Firms

<table>
<thead>
<tr>
<th>Company</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>TruGreen-ChemLawn</td>
<td>$820,000,000</td>
</tr>
<tr>
<td>TruGreen LandCare*</td>
<td>$450,000,000</td>
</tr>
<tr>
<td>Environmental Industries.</td>
<td>$436,000,000</td>
</tr>
<tr>
<td>The Davey Tree Expert Co.</td>
<td>$314,000,000</td>
</tr>
<tr>
<td>The Brickman Group</td>
<td>$150,000,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$2,170,000,000</strong></td>
</tr>
</tbody>
</table>

The market is growing. In 1999 the market grew 19.5% (by revenue). In 1998 the market grew 24.1%, and the dip between the two years is attributable by industry analysts to a labor shortage, not a lack of customers. If companies had been able to hire more employees, they claim they would have been able to grow more than they did. One industry publication predicts overall green industry growth at 20-25% in 2000 and 18-22% in 2001 (West and Wisniewski 1999).
Exhibit 5-3: Industry revenue by segment

Not only is the market's revenue growing; so are the profits. 77% of landscape companies were profitable last year. The average profit for all companies was 16.4%. Exhibit 5-2 shows a breakdown of the industry by size of profits earned.

The lawn and landscape services market itself breaks into several components. The single-family residential market accounts for almost two-thirds of the total revenue in the industry, while the commercial segment (business to business) is estimated at $16 billion (Lubove 1998). This is of interest, as it is the commercial segment of the market that consolidators have primarily focused on to date. Exhibit 5.3 shows the overall breakdown of how the total $61 billion in market revenue is divided, and Exhibit 5-4 provides a summary of additional industry statistics.

Exhibit 5.4: Landscape industry statistics

<table>
<thead>
<tr>
<th>Category</th>
<th>Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Companies</td>
<td>70,000</td>
</tr>
<tr>
<td>Revenues</td>
<td>$61 billion in 1998</td>
</tr>
<tr>
<td>Employees</td>
<td>875,000</td>
</tr>
<tr>
<td>Average years in business</td>
<td>17.7 years</td>
</tr>
<tr>
<td>Average year-round employees</td>
<td>12.5</td>
</tr>
<tr>
<td>Average seasonal employees</td>
<td>9.4</td>
</tr>
<tr>
<td>Average 1998 gross sales</td>
<td>$863,800</td>
</tr>
<tr>
<td>Average 1998 net profit</td>
<td>16.4 percent</td>
</tr>
<tr>
<td>Average sales growth over 1997</td>
<td>22.7 percent</td>
</tr>
<tr>
<td>Anticipated sales growth 1999</td>
<td>19.5 percent</td>
</tr>
</tbody>
</table>
Five Forces Analysis

From this short industry profile, one can discern the now-familiar characteristics of an industry that is a candidate for consolidation. It is large, fragmented, and has growing revenues and reasonable profits. In most ways, it mirrors the other markets we have looked at, an observation confirmed in the summary of the five forces presented in Exhibit 5-5. Market power for the service providers is low; Both their buyers and suppliers have greater market power. Substitutes are few, thought there is variation in the mix between turf and other types of horticulture in different areas of the country, and there is the alternative available not to contract out for the service. Rivalry is high, especially in the commercial sector, where competition is significantly price-based.

Exhibit 5-5: Market forces in landscape maintenance industry

<table>
<thead>
<tr>
<th>Market Force</th>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer power</td>
<td>Very high. Many providers to choose from.</td>
</tr>
<tr>
<td>Supplier power</td>
<td>Moderate. Significant competition exists among multiple alternative suppliers.</td>
</tr>
<tr>
<td>Rivalry</td>
<td>High, especially in the commercial sector, where competition is significantly price-based.</td>
</tr>
<tr>
<td>Barriers to entry</td>
<td>Very low.</td>
</tr>
<tr>
<td>Substitutes</td>
<td>Moderate. The primary alternative in both the residential and commercial market is to attend to landscaping requirements oneself. There is the possibility of changing the landscaping mix to reduce maintenance requirements.</td>
</tr>
</tbody>
</table>

In this market, entry barriers are particularly low. Equipment requirements to enter the industry are not excessive, even in the commercial segment targeted by the consolidators. Many operators start with residential and eventually grow into larger commercial accounts, meaning there are always new entrants queuing for the commercial market. There are also few regulatory barriers or controls to discourage entry.

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13 After college, the author started a small landscape operation solely on the strength of his Sears credit card, and operated the business out of a Ford Fiesta.
III. The Consolidators

LandCare USA

LandCare USA is a prime example of the modern, venture-financed "poof" company. Backed by Notre Capital Ventures, LandCare USA was created through the simultaneous acquisition of seven existing companies and the issuance of public stock. This is a significant departure from the pattern of early roll-ups, in which an incumbent would struggle to finance several early acquisitions to build a sufficient critical mass in order to go public. In this case, the public market provides the immediate, high-risk capital to build the initial critical mass as well as the currency for continued acquisitions.

The creation of LandCare USA was the result of a deliberate screening and structuring process that Notre had used in many other roll-ups, including ventures in the motor coach, package courier, optometry practice and heating (HVAC) contracting businesses. Each followed the same pattern of assembling several firms for acquisition and then completing a public offering to complete those acquisitions. In these deals, Notre retains a management fee and is vested in the venture through retention of a portion of the stock.

Notre prides itself on its research and ability to identify industries that are appropriate for roll-up ventures. In its targeting, it focuses on particular industry characteristics (Notre website):

- Customers focusing on outsourcing and single sourcing
- Opportunities for economies of scale and operating synergies
- Potential benefits through access to capital and technology investments
- Small businesses looking for exit strategies
- Ability to attract and retain employees

Notre established LandCare USA in 1997, and went public in 1998 with the consolidation of seven firms, which had a combined revenue of $120 million (LandCare Prospectus). The firm then continued to acquire additional companies, buying several of the largest landscape companies in 1999.

The company's stock performance was disappointing, however, and LandCare was itself acquired by TruGreen ChemLawn in January 1999 for $250 million in stock and debt (Lubove
In commenting on the outcome, Bill Murdy, the CEO of LandCare USA cited the lack of success in the stock offering as the primary reason.

I think our progress thus far has met most of our expectations in terms of being able to expand geographically and create a high-quality company. The only thing that didn't hold up to our expectations was the acceptance by the stock market of our consolidation concept (Code and West 1999).

TruGreen ChemLawn

TruGreen ChemLawn started as a small private company in 1974, operating under the business name of ChemGreen. TruGreen ChemLawn is now a division of ServiceMaster, a large publicly-traded company that operates many residential and commercial service businesses under various brands, including MerryMaids, Terminex and American Home Shield. ServiceMaster has revenues of over $6 billion.

The landscape division now has locations in 47 states and 3 countries. The operating model is primarily based on company-owned locations, but a number of franchises have also been granted. The focus of the business is in the mid-west and New England areas.

The TruGreen division of ServiceMaster had been acquiring small and regional lawn care providers for several years before the LandCare USA acquisition. When the formation of LandCare USA was first announced, TruGreen countered with its own acquisition of several firms totaling $40 million in revenue and the launching of a maintenance division (previously the firm was focused on fertilizer and other chemicals, referred to in the industry as "lawn care"). With sales from both the LandCare and ChemLawn divisions totaling more then $1.2 billion TruGreen is now the largest and most aggressive competitor in the market. Key events in the evolution of TruGreen ChemLawn are included in Figure 5-6.
Exhibit 5-6: TruGreen ChemLawn history

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979</td>
<td>Establishes its corporate headquarters in East Lansing, MI., operating as TruGreen.</td>
</tr>
<tr>
<td>1990</td>
<td>TruGreen is acquired by ServiceMaster.</td>
</tr>
<tr>
<td>1995</td>
<td>TruGreen ChemLawn Plantscaping, the maintenance of interior plants, is introduced as a new service line to commercial customers.</td>
</tr>
<tr>
<td>1997</td>
<td>Barefoot Grass and Orkin Lawn Care and Plantscaping divisions are purchased.</td>
</tr>
<tr>
<td>1998</td>
<td>TruGreen ChemLawn enters the commercial landscape management industry with several acquisitions.</td>
</tr>
<tr>
<td>1999</td>
<td>TruGreen ChemLawn acquires LandCare USA, Inc.</td>
</tr>
</tbody>
</table>

Other Players

Several other landscape companies also have been involved in consolidation activities. Environmental Enterprises is the largest private and independent firm at an estimated $500 million in revenue, operating with several divisions including a nursery, a lawn maintenance operation, and a large landscape construction arm. Environmental has not been directly active in the consolidation game through acquisitions, but instead has been investing in a franchising operation under the U.S. Lawns brand. Several other franchising operations are operating in the industry as well.

Another large independent firm, The Bricklin Group, Ltd, sold a 51% interest in their firm to a venture capital group with the expectation that they will become active acquirers. Limiting their focus to the contracting market (not maintenance), they completed four acquisitions in 1998. In their "Status Report on the Green Industry," one trade publication described the imminent arrival of other, smaller consolidators, including another venture-backed initiative called GrowScape (IGIN). On the regional and local level, several initiatives to combine firms are also rumored to be underway, and there is a cooperative buying group being created to provide a competitive tool to the remaining independents.

IV. Patterns of Consolidation

Although there had been some level of consolidation activity in the landscape market going back more than ten years, the roll-up process in commercial landscape maintenance
began in earnest in 1998. Prior to that merger and acquisition activity was limited to occasional strategic deals, such as an investment by the Scotts Company in Emerald Green, a multi-location operator, and consolidation activity in the chemical application area such as TruGreen's acquisition of Barefoot (Gibson 1996).

In the maintenance segment of the industry, the process of consolidation over the last two years shares some common patterns with the previous two industry examples, but a number of notable differences as well. From the industry and company information provided in the previous sections, we can summarize the following similarities.

- The industry is fragmented, with many small operators susceptible to acquisition offers. As in the other industries examined, one can find consistent references to the benefit for owners of having an option to sell their businesses at retirement.

- The operators have low market power relative to their suppliers, and a primary focus and rationale is on cost savings. In its efforts to recruit sellers, LandCare USA emphasized some of the cost benefits of a consolidated company. They specifically cited insurance savings and capital costs on equipment and supplies.

- As in the funeral industry, the pattern in this industry has generally been to retain the use of local names. In comments about the LandCare deal it was noted that "there is significant value in the names of the original founders in their current markets, and those names will be used indefinitely because a strong name is of utmost importance to customers" (Code and West, 1998).

- There is a geographic focus to the expansion, with an emphasis on a decentralized operating model and a desire to retain management. In an article entitled "Who are the National Firms Buying?", Pro magazine, a trade publication, asked five large firms about the patterns and processes involved in their acquisitions. As we see in other roll-up ventures, these firms have a strong desire to expand horizontally into new regions and to add firms to "tuck-in" to their existing operations to improve efficiencies. Each also attested to their willingness, and most their preference, to retain the management of the firms they acquire (Hatlen, May 1998). This approach allows them to scale the operation quickly, and also allows them to address one of their most significant constraints, which is a shortage of labor.
There are key differences in the patterns and processes of this roll-up as well. One of the most notable is that the consolidation activity was instigated by outsiders. LandCare was the creation of Notre, an investment firm, and at the time consolidation began TruGreen was not a significant operator in landscape maintenance. In other industries, we saw an incumbent player develop an insight into an alternative operating model and then act on that belief. In landscape maintenance, it was outsiders who had the insight, and the alternative operating model was less dramatic, based more on incremental benefits rather than a fundamental change.

A related difference in the pattern of roll-up in this industry was in the leadership of the consolidators. In the case of LandCare USA, the top management team had no industry experience. LandCare's CEO at the time of its public offering was Bill Murdy, a veteran of the energy industry and the real estate and venture capital markets. While the heads of the acquired firms were all brought into board and management roles, the fact that the CEO was more of a financial professional than an experienced industry manager is symbolic of the nature of the roll-up activity in this industry.

Another difference in the roll-up of the landscape maintenance industry versus other, earlier roll-ups was the immediate use of the public market to fund the activity, as described earlier. On the one hand, this reduces the friction of securing early financing in growing the firm. On the other hand, it creates a vulnerability based on the need for a rising stock price to act as a powerful currency for continuing acquisitions.

It is also interesting to compare the manner in which the buying and selling of firms has occurred in this industry versus other, earlier roll-ups. In this case, we find sophisticated sellers, well aware of the roll-up phenomenon and well-coached by a cadre of consultants. This is quite different than the "discussions around the dinner table" that characterized earlier buying activities by well-known industry incumbents such as Waltrip and Buntrock.

Reactions and Secondary Effects

One result of the sophistication of the industry participants about roll-ups is a widespread understanding of the secondary economics that are part of the dynamic process of roll-ups. In the landscape industry journals, one can find several discussions about the potential value of businesses and how they will be affected by changes such as TruGreen's purchase of LandCare USA.

Just as in other industries, reaction to consolidation activities ranges from fear to joy.
The most common concern about the changes are in the pricing area. The consolidators have focused exclusively on the commercial markets, where price competition is quite intense. Some, however, see opportunity in the arrival of large corporations into the field.

These new companies have to gain market share, and one way they are going to do that is through pricing. But I think they're also going to lose work that I can go after while they're feeling their way through the assimilation of all these different groups into one company (Code and West, 1998).

Others are happy to have the option of selling their business. Tom Haylin, the editor at Pro magazine, describes a Florida contractor who decided to sell rather than compete after Environmental entered his market. For him, this was a good outcome, because he was planning to retire anyway and now his son works for Environmental and "has all the advantages of working for a big company: benefits, vacation, personnel department, etc." (Hatlen, March 1998). The publisher of IGIM, in an editorial, supports that perspective with the following summation.

Now the picture is complete...you can start your own business, build it, and enjoy the fruits of your labor...and when you're ready to sell there's a market to sell it. The true American dream" (Goldstein, 2000).

V. Analysis

The roll-up of the landscape maintenance industry is well underway, and many of the characteristics of the industry are similar to other industries targeted for consolidation. In this case, however, the primary drivers of the roll-up process appear to be more motivated by external financial interests rather than driven by fundamental strategic objectives.

In their own explanation of why consolidation is appropriate in the industry and creates advantages, Notre notes several underlying trends and benefits (Notre Web Site):

- Increased national ownership and outsourcing relating to commercial properties, requiring wider geographical coverage
- Significant savings on worker's compensation and other insurance
- Volume purchasing
- Better asset utilization through route density
- Cross-selling opportunities
The first point, relating to the trend by large property owners to desire a single vendor for multiple properties, is cited frequently as an underlying trend in the industry, and there is no doubt that it has some degree of validity. Whether this change in buying patterns is enough to drive a fundamental restructuring of the industry is questionable, however, and while the next three points all deal with cost savings through increased scale, nothing on the list of causes compares to the type of fundamental changes found in the waste and funeral industries during their initial consolidation phases.

From a five forces perspective, the only change, primary or secondary, one would note from consolidation is perhaps a slight increase in market power for industry firms at the expense of their suppliers. Other forces are relatively unchanged, and there has been no change of consequence in the regulatory environment.

The last point on the list, cross-selling, raises an interesting point in regard to potential economies of scope in this industry. When discussing an "optimum mix" of services, Tom Oyler, the head of U.S. Lawns, suggests that 25% landscape maintenance and 75% landscape installation (construction) is best. The reason cited is that maintenance customers will typically use their maintenance provider for most construction projects, at least up to a certain size. In the case of Environmental Services, their $125 million Environmental Care division specifically combines these two types of services for just this reason.\(^\text{14}\) This suggests an economy of scope for providers that can deliver the appropriate mix of services, and indeed it appears that the consolidators are creating this mix through their acquisitions. Another example of potential economies of scope was noted in an irrigation industry magazine.

Not too many years ago landscape contractors built and maintained landscapes while irrigation contractors focused on irrigation installations and repairs. Today, all that is changed. Few pure irrigation contractors exist today. Nowadays, landscape contractors install most of the irrigation. A recent survey indicates that more than 77% of contractors who responded to the survey do some sort of irrigation work. As one landscape contractor succinctly put it, "I am tired of leaving money on the table" (IGIN).

Still, the observation that there are economies of scope in the industry does not provide a sufficient rationale for consolidation, since many smaller operators deliver mixed maintenance

\(^{14}\) This observation was shared with the author during a discussion with Bruce Wilson, the president of Environmental's maintenance division, in April 2000.
and installation services already. When looked at from the perspective of minimum efficient scale, one can argue that the minimum efficient scale in this industry is far smaller than what the consolidators are creating. In their targeting of acquisitions, several of the consolidators are specifying firms of several million dollars as the platforms for new market "beachheads" ("tuck-in" acquisitions might be smaller). If the firms are building to a scale significantly in excess of the minimum efficient scale for the industry and there are not substantial strategic benefits to larger size, than the diseconomies of scale for the aggregating firms may be greater than the economies of scale and scope gained.

This is the impression gained from one conversation with an individual who sold his multi-million dollar landscape firm to one of the consolidators ("Seller" interview). In describing the current working environment, he paints a picture of a tremendous coordination challenges in synchronizing systems across the acquired firms and a resulting loss of focus on their customers.

Alternative Approaches to Aggregating Market Power

While national firms are busy acquiring local businesses, several franchising operations are simultaneously attempting to drive their own version of consolidation. Their basic pitch as to the benefits of an independent operator becoming a franchisee is remarkably similar to the reasons given by those who are buying companies, and center on buying power, professional management, and the changes in property management and outsourcing. They also feel they have a superior approach to consolidation, however. The following selling points are taken directly from marketing materials of U.S. Lawns, the franchise operation of Environmental Industries (Environmental 1999).

- Franchising has proven to be the most efficient method of consolidation in "cottage," owner/operator industries.

- Franchising is a financially efficient method for consolidation as compared to other consolidation methods such as acquisitions, which require heavy capital investments. Large capital investments cannot be justified due to the industry's historically low earning-to-sales ratio performance.

- Franchising utilizes the owner/operator, the lifeblood of this industry.

- Franchising provides for administrative standardization, which results in operating efficiencies and allows for "branding" and brand awareness.
• Franchising is recognized as the most effective way to "globally" market goods and services.

• Franchising is the perfect operating system for the "customer intimacy" model.

• Franchising is the most flexible model offering the greatest amount of independence to the owner/operator.

Whether these arguments in favor of franchising are true or not, it is interesting to see that the basic opportunity to increase buying power and the level of professional management can be met in several ways, and that some have lower costs, dollar and otherwise, than the traditional roll-up process through acquisition. Another approach to creating market power is through virtual consolidation through the Internet. Several initiatives are underway in the industry, including one under the name E*Garden. In their announcement, the description of the value proposition of this business to business web venture sounds similar to the pitch by acquirers and franchisers. According to Linda Watson, the president of the firm:

Through E*Garden, manufacturers and distributors of lawn and garden merchandise can more efficiently and profitably sell their products. Independent retailers and lawn and garden professionals can use E*Garden to buy all of their lawn and garden merchandise from a wide range of suppliers at competitive prices" (Landscape Group 2000).

VI. Summary

In the prior section, we were unable to identify major changes in the industry forces model that are occurring through consolidation, nor were we able to find a major strategic rationale behind the roll-ups. Coupled with the fact that the roll-up activity has been instigated from outside and lead by individuals without industry credentials, we are left with the interpretation that the roll-up of the landscape maintenance industry is primarily driven by outsiders with financial but not strategic motivations.

This may be an example in which the roll-up firms are essentially engaged in financial arbitrage, buying assets (firms) at one price and hoping to realize a higher value in the public market. This effect can be pronounced when there is a robust market (and high multiple) for the consolidator's stock, as was the case for Waste Management in the early days of its roll-up activity. The effect is also aided by the fact that firms purchased for a given multiple of earnings may immediately be worth more as lower cost buying is calculated into their profit projections.
Whether the consolidation will create a sustainable advantage for roll-ups in the landscape market, however, is uncertain. It is true the consolidated firms will benefit from reduced costs and increased market power, and will have an increased ability to service desirable commercial clients seeking outsource partners across multiple geographies. On the other hand, the integration challenges of bringing together several sizable firms into an effective operating entity will create costs and friction. The minimum efficient scale remains extremely low and there are very low entry barriers, especially in the residential sector, which results in a steady stream of aspirants to the commercial business. One industry publication cited an Inc. magazine article that estimated 13,000 new entrants into the industry had occurred in each of the years 1997 and 1998 (IGIN).

In the end, diseconomies of scale and secondary effects from the consolidation activities of the roll-ups may overwhelm the benefits that the consolidators are seeking to gain. Sellers understand the secondary supply and demand economics of the phenomenon, and with more consolidators likely to arrive, those valuations will increase. At the same time, additional entrants are likely as middle managers from firms being sold decide to enter the business themselves, and competing consolidation models such as franchising and Internet markets will continue to compete with the roll-ups. In the end, the benefits of horizontal expansion may be insufficient to create a sustainable advantage for the consolidators.

This perception is reflected in a comment by Tom Oyler, who heads Environmental's franchise operation. In describing the advantages of franchising over traditional roll-up, he said that, "From the beginning we believed industry consolidation was inevitable, and that the owner/operator was the most efficient deliverer of goods and services, and would continue to be so." (Hatlen 1998).
Chapter 6: The Future of Roll-ups

1. Introduction

Through the examples of roll-up activity in three industries, we have seen how the concept and practice has evolved over the last thirty years. While our first example in waste appeared to involve a deliberate process of growth based on a perceived opportunity to gain strategic advantage, the most recent example in landscape maintenance seems to be based more on financial engineering and arbitrage than fundamental strategy. Now, it appears that the financially-driven roll-up model has fallen out of favor. According to one observer, "The roll-up business seems to be a waning fad on Wall Street, especially given that most good industries have already been plumbed" (Investor's Business Daily 1999).

The core of the problem seems to be falling stock prices, which act as both a cause of problems for roll-ups as well as a result in a negative feedback loop. That's because rising stock acts as an important currency to fuel acquisitions in the roll-up model. An article by Laura Goldberg in the Houston Chronicle summarizes the point.

Without decent valuation of stock to use as currency for deals, new roll-ups can't keep up with the strategy of reaching a critical mass through acquisition (Goldberg 1999).

As recently as 1996 a Forbes article on the poor company phenomenon was able to include a subtitle with the simple declaration "Consolidation Pays," and to include several examples of then-current stock prices for roll-ups which were nicely increased over IPO prices (Palmieri 1996). A 1999 article, however, comes to a different conclusion, providing a set of results that paint a picture of a strategy that is no longer working (Exhibit 6-1) (Goldberg 1999).
Exhibit 6-1: Roll-up stock performance

<table>
<thead>
<tr>
<th>Firm</th>
<th>IPO Price</th>
<th>Recent/Last Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Delivery Systems</td>
<td>$10</td>
<td>$37 7/8 1</td>
</tr>
<tr>
<td>Home USA</td>
<td>8</td>
<td>9 7/16 1</td>
</tr>
<tr>
<td>LandCare USA</td>
<td>8</td>
<td>10 1/4 1</td>
</tr>
<tr>
<td>Physicians Resource Group</td>
<td>13</td>
<td>1 1/8</td>
</tr>
<tr>
<td>Coach USA</td>
<td>14</td>
<td>42 1/16 1</td>
</tr>
<tr>
<td>Comfort Systems</td>
<td>13</td>
<td>17 1/8</td>
</tr>
<tr>
<td>Metals USA</td>
<td>10</td>
<td>12 15/16</td>
</tr>
<tr>
<td>TransCom</td>
<td>8</td>
<td>3 5/16</td>
</tr>
</tbody>
</table>

1 Company has been sold

With a negative reaction on Wall Street, roll-ups lose their fuel and it seems likely that we will see fewer roll-ups in the future. But why the negative reception on Wall Street, especially in the midst of a strong, sustained bull market? Our look at three industries leads us to believe that some roll-ups are not based on sound strategy, and that inspection problems, integration challenges and diseconomies of scale may outweigh the benefits of size for some of those firms. Realizing this, Wall Street may simply be expressing its skepticism in roll-ups that are not driven by fundamental changes in minimum efficient scale.

There are other factors contributing to the cloudy future for roll-ups, however, including pending changes to accounting rules and the impact of the Internet. These are described in the next two sections.

II. Accounting Challenges to Roll-ups

Traditional roll-ups have one particularly tough challenge to overcome, which involves the accounting methods involved in acquisitions and the impact on the acquiring company's financial statements. Traditionally, roll-up acquisitions have been handled as "pooling of interest" transactions. The rules governing when pooling can be used, however, are now quite restrictive15 and the use of pooling has been under attack by the SEC, which favors purchase

15 "Business Combinations," (Accounting Principles Board) Opinion No. 16
accounting.

For roll-ups, the differences are significant. Goodwill is "the amount by which the purchase price exceeds the fair market value of the net identifiable assets" (Anthony, et. Al. 1999, p.369). In the purchase of service businesses, the amount by which the purchase price can exceed the market value of acquired assets can be significant. Traditional ("purchase") accounting requires goodwill to be carried as a liability on the balance sheet and amortized as an expense on the balance sheet for a period no greater than 40 years (15 years for tax purposes). Thus, every acquisition that results in goodwill creates a future drag on earnings.

The pooling of interest method provides the key advantage of avoiding goodwill altogether. Purchased assets are simply transferred to the acquired company's balance sheet at book value (not fair market value, as in purchase accounting), and the acquiring firm is not required to account for the difference of purchase price over asset price on the balance sheet at all.

Thus, the pooling of interest method avoids the goodwill issue by allowing the acquiring firm to simply aggregate the two firms' balance sheets. There is no drag on earnings, simply a positive bump on the earnings statement from adding the revenue of the acquired firm. Thus, pooled acquisitions appear in the statements primarily as positive revenue and earnings growth; if they continue as a pattern, they create an appearance of continuous revenue and earnings growth.

Because of the advantages that pooling offers to roll-up ventures, those involved in such ventures have argued strongly in favor of the retention and expansion of the pooling method. Their arguments include the fact that, since goodwill is treated inconsistently, sometimes written off immediately and sometimes over 40 years (depending on interpretations of the rules), the purchase method produces inconsistencies that are confusing to Wall Street. In a letter to the editor of CFO magazine in 1997, Steve Harter, President of Notre Capital Ventures, expressed the opinion that "In recording an acquisition by the pooling-of-interest method, no goodwill is recorded, and therefore the true economic value of a merger can be determined" (Harter 1997).

Whether they agree with that reasoning or not, accounting professionals do seem to agree that restricting the use of poolings will dampen merger and acquisition activities of all types. One accounting professional made that point in a second article in CFO magazine entitled "Draining the Pool":

Deals die today all the time when they can't get pooling treatment, because

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managements (sic) demand that they be accretive to earnings immediately. With no pooling allowed, and a short life on goodwill, acquisitions are going to be a lot more expensive on an accounting basis. As a result, some deals won't get done (Springsteel 1999).

The challenges to the pooling method are very significant to roll-ups, and the threat of changes may be part of the reason for their recent lack of popularity on Wall Street.\textsuperscript{16}

\textbf{III. The Impact of the Internet on the Traditional Roll-up Model}

In previous chapters we have seen that one of the most consistent rationales for roll-ups is to aggregate buyers in fragmented markets to increase their market power. Today, the Internet provides an alternative way to accomplish the same thing.

Since the creation of the World Wide Web, the commercial Internet has evolved through several waves, each characterized by a different business model. The first model was content and advertising based. The fundamental concept of these commercial sites is to attract users to content (or allow them to search for content) and expose them to advertising as they access the content. The revenue model is based on advertising.

The second wave of commercial Internet sites has been based on the business to consumer (B2C) e-commerce model. These types of sites can be sub-categorized into several groups, including e-tailers and infomediaries. The first group is best represented by Amazon.com, and the primary revenue model in the B2C e-commerce business model is product sales. Of course, through both waves, many Internet commerce companies are also engaged in selling the tools, software and services needed to create the underlying infrastructure of the commercial web.

The third wave of the commercial web is characterized by the business to business (B2B) model. B2B is expected to grow at an enormous rate over the next several years; Forrester estimates a ramp up from $400 million in 2000 to $2.7 billion in 2004 in the size of the U.S. B2B e-commerce market (out of $3.5 billion total) (Sanders 2000). Like earlier waves of the commercial Internet, the B2B generation also can be subdivided into several models. One model, identified by Forrester as eMarketplaces, is based on many of the same factors as the

\textsuperscript{16} The Financial Accounting Standards Board (FASB) has indicated they intend to end the use of pooling by 2001 (CFO Magazine, December 1999).
roll-up phenomenon.

eMarketplaces

eMarketplaces are on-line sites where groups of buyers and sellers meet to trade goods. This differs from simple bi-lateral exchange across the web between two firms. Trade through eMarketplaces is expected to dominate the total B2B marketplace, accounting for as much as 53% of the total B2B market.

In analyzing different B2B business models, Forrester has identified three distinct types, which they call aggregators, auctions and exchanges. The aggregator model, in particular, is conceived as a way to collect fragmented groups of buyers and/or fragmented groups of sellers and connect them together. The primary, though not sole, rationale for the aggregator model is to allow them to "concentrate demand" (Lief 1999). In the discussion of the aggregator model, echoes of the typical roll-up market are heard. For example, the market impact of the model is summarized in two points: Reduce fragmentation; and create a more level playing field for smaller players.

Similarly, in identifying the specific market inefficiencies attacked, the list includes the fact that in the target markets "smaller buyers are locked out of volume discounts." If the rationale for the aggregator model in eMarketplaces is based on some of the same market characteristics that attract roll-up activity, what is the relationship between the two models? It seems likely that their primary relationship will be to be competitors. As competitive vehicles to allow market participants to increase their market power, the growth of eMarketplaces will likely come at the expense of conventional roll-ups through acquisition.

In addition to the primary affect from competition between "virtual consolidation" and traditional consolidation, there is a secondary effect of Internet eMarketplaces in industries that are already being consolidated through acquisitions. In those industries, the strategic benefits of the roll-up include the assumption of improved cost models. If independent firms can gain some of the same benefits through group buying across the Internet, the relative advantage enjoyed by the roll-up is reduced. This diminishes the relative economies of scale benefits, but of course the diseconomies and integration costs remain, thus reducing the potential payback to the consolidator.

Through both these effects -- acting as a competitive means to consolidate market power and by eroding the cost advantages of the roll-up -- virtual consolidation through
eMarketplaces threatens to diminish the future prospects for traditional roll-ups executed through acquisition.

Yet another potential effect of eMarketplaces is to accelerate the restructuring of supply chains in fragmented industries, specifically in changes to traditional distribution/dealer distribution channels. For example, a Senior Vice President at Deere, a major equipment supplier to the green industry, predicted that "as many as half of the dealers will be gone in ten years due to changes in distribution" (Landscape Group). He believes dealers should focus on after-care service. Toro, another large supplier to the industry, has already purchased a number of their dealers.

**IV. Summary**

With roll-ups already under scrutiny and out-of-favor on Wall Street, it is hard to be optimistic about their future. In a previous chapter, we became aware of franchising as a potentially less-capital intensive way to provide the benefits of consolidation through acquisition. In this chapter, we noted that the elimination of the pooling-of-interest method as a way to account for the acquisitions made by a roll-up will damage the financial strategy that underlies the model. At the same time, the eMarketplace model in the B2B Internet market provides another competitive model, and also undermines the potential cost benefits of scale.

This is not to say that building large companies through acquisition will go away as a strategy. As was the case in solid waste, technology changes could significantly alter the minimum efficient scale in an industry, requiring firms to aggregate or eventually lose. Large numbers of roll-ups that are not driven by such strong strategic drivers may be a phenomenon of the past, however.

Even one of the most successful people involved in recent roll-ups seems to acknowledge the point. In comment made to Business Week magazine, Steve Harter, President of Notre Capital Ventures, the force behind dozens of poor companies, made the point that the roll-up phenomenon may have gotten ahead of itself. He likens the situation to the LBO craze of the 1980's.

While there were good deals done by knowledgeable people, a lot of people did them who didn't understand the dynamics of LBOs. They got into trouble and bankrupted companies. The same thing is happening with consolidations today (Sparks 1998).
Chapter 7: Summary and Future Research Suggestions

In the previous chapters we have described the basic roll-up model and mechanisms, inquired into how the model was employed in the consolidation activities in three industries, and looked into the future to see how the practice might evolve. In this final chapter, our intent is to synthesis and summarize our observations.

We have found that roll-ups share a large number of common traits, ranging from the characteristics of the markets involved (fragmented, low fixed assets) to the basic mechanisms employed (stock as purchase currency, decentralized management models). We have also seen significant differences. Two of the industries explored involved strategies employed by industry incumbents, led by industry leaders, and involved fundamental changes to operating models and corresponding alterations in the forces at work in the industry. The third, the landscape maintenance market, was driven by financial interests outside the core business and appeared to involve less alteration in the market forces model.

Other differences are also notable. The funeral industry involves a business to consumer model, while the other two industries studied focus primarily on business to business transactions. That may explain the role of consumer advocacy and protest in the funeral home market and the resulting challenges to the consolidators. Another notable difference was the degree of competition between consolidators. While each roll-up involved competitors vying for acquisitions, that competition was particularly fierce in the funeral home industry.

Competitive Strategy versus Financial Maneuver

Consistently, we have seen that the roll-up strategy has two dimensions to it, first as a competitive strategy and second as a financial maneuver. Over time, the emphasis has appeared to shift to the latter, with an influx of financial and consulting firms focused explicitly on identifying industries with the proper dynamics to support the financial model of consolidation. With the move to seeing roll-ups as an arbitrage opportunity based on differences in price-earnings ratios has come a corresponding rise in cynicism about the model.

For example, one analyst provided the following warning in a Business Week article. "They (roll-ups) work for a while, but investors better be ready to get out of the thing before it collapses." The article goes on to warn about potential dangers and red flags, including consistent onetime charges, declining growth in core companies, or ever larger acquisitions.
used to mask serious problems (Sparks 1998).

In another article, this one in CFO magazine, another commentator points out that "fueling growth by buying companies with lower P/E ratios has long been discredited as a strategy that has no rationale" and compares the hollowness of the strategy with the diversification phase of the 1960's (McCafferty, 1998).

Perhaps the strongest condemnation of roll-ups comes from a specialist in the area at Credit Lyonnais Securities named Jeff Evans. A longtime watcher of the phenomenon, Evans delivers a scathing indictment about the fundamental concept: "Its the greater-fool theory. At some point it has to stop, and someone is left holding the bag" (McCafferty, 1998).

Our own look at consolidations in several industries lends support to this negative view of roll-ups as financial plays, but on the other hand we are confident that some roll-ups are based on sound competitive strategy. When there are fundamental changes in the dynamic forces operating in an industry, whether they be in technology, regulation or operating models, we saw that the consolidation model can be an effective way to grab the advantage. Even in these cases, however, there appears to be a tendency for the acquisition pattern to develop its own momentum, perhaps driven by the now-public firm's need to provide Wall Street with continued top-line growth.

This discussion brings us back to thinking in terms of minimum efficient scale. At least one author feels that service corporations should be structured on that basis. In a 1990 article in the McKinsey Quarterly, James Quinn and Penny Paquette suggest that service firms "obtain strategic advantage not through traditional economies of scale, but through focusing on the smallest activity or cost units that can be efficiently measured and replicated" (Quinn and Paquette 1990). This concept may be at the core of understanding both the benefits and risks of rapid horizontal expansion through the roll-up model. When the expansion can effectively replicate units operating at minimum efficient scale, or if that scale has changed due to changes in market forces, roll-ups present a credible competitive strategy. When integration efforts, organizational structures and management focus on the core business and operating model are sufficiently diminished, however, the balance shifts in the roll-up and the costs outweigh the benefits. Perhaps put more simply, without substantial economies of scale in a roll-up, the diseconomies of a larger organization can easily tip the scale.
Secondary Effects

Another risk to the success of the roll-up as strategy is the tendency for secondary effects to interfere with the ability to harvest strategic and financial benefits. The first and most important secondary effect noted is in the micro-market created around the supply and demand of available firms. As roll-ups begin the process of consolidation, their acquisition costs increase, especially when there is competition among consolidators. The result is a diminished ability to realize a gain on the difference between the purchase price and the value within the roll-up. In the language of the finance community, the arbitrage opportunity is diminished, as we saw in the funeral home industry.

Another secondary effect, less explored in our industry analyses, involves the creation of competitors through the acquisition activity. This is a hypothesis without sufficient evidence as yet, but it appears likely that as acquisitions occur, middle managers of existing firms observe the activity and feel an added incentive to start another new enterprise. The net result of such activity is to further add to the supply of new companies.

Fundamental to the discussion above is the concept of entry barriers, or lack thereof. Consolidators often point to the fact that they seek industries with substantial entry barriers, usually defined as focused customer relationship based on established reputations, in their targeted markets. This makes the benefit of acquisition high, translating essentially into a customer acquisition cost. By retaining local names and management, this tactic is played out in many roll-ups. In other industries, the combination of the roll-up activity and underlying changes in market structure act to increase entry barriers, as was certainly the case in the solid waste industry, where technology changes drove up the minimum efficient scale. In the landscape industry, however, we do not observe substantial entry barriers. That lacking may present a fundamental challenge to the idea that roll-ups can capture substantial economic benefits in that industry.

A final secondary effect to note involves the potential opportunities created by roll-ups to exploit, through vertical integration activities, the very changes in market dynamics that they help to create. For example, Waste Management moved quickly to gain strategic control of a critical resource, landfill capacity, and SCI and other funeral operators did the same through moves into cemeteries. When successful, it appears that such moves can indeed create strategic advantages for the roll-ups, though they carry risk of failure as exemplified by SCI's failure in the casket business. Similarly, diversification attempts without a significant vertical
aspect or strategic control benefit, such as SCI's move into flowers, do not appear to deliver competitive benefits.

As we conclude we can summarize our perspective on roll-ups with the observation that there may be value in the strategy, but that fundamental industry analysis and consideration of secondary effects are essential to determining the potential benefits. In this view we are joined by a partner at Ernst and Young, who observes that he "wants companies with a real strategy, not just a consolidator that is trying to build revenue by buying companies cheaply" (Brush 1997).

Future Research

The work in this paper has been based on a wide-ranging research effort focused on understanding the roll-up concept in general, and the history of consolidation in three industries in particular. The benefit of this approach lies in the broad perspective it provides and the resulting ability to decipher the patterns and processes that are generally employed in the strategy. From this vantage point, reasonable hypotheses about the nature and results of the roll-up model can be posited.

Proving those hypotheses is another matter, however. The natural follow-on to the work included in this paper would be a statistical investigation into the quantitative data available on the results of roll-ups across a large group of industries.

Basic financial indicators would provide an immediate ability to correlate particular patterns with particular results. In addition, the Economic Value Added (EVA) model would allow a researcher to synthesize the results obtained through roll-up activity in various industries and by various firms, providing insight into the degree to which the strategy delivers shareholder benefits.

We are hopeful that we will see such quantitative research in the future. In the meantime, we are satisfied that we understand the roll-up process model in its various incarnations more fully, and have a sense of both how and when it can provide a basis for sustainable competitive advantage -- as well as when it is unlikely to.
Sources and References

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3. Forrester, April 2000


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