I. Introduction
In 1952, Harry Markowitz published his ground-breaking work titled “Portfolio Selection” in the Journal of Finance, and the world of investing was turned upside down. ¹ As a graduate student at the University of Chicago, Markowitz proposed that the performance of a portfolio is based on the collective risk and return properties of the portfolio, rather than the properties of each investment in isolation. Much of his research focused on the mathematical theory of diversification, with the concept of correlation as a central theme.

In the investment industry, correlation is a measurement of the co-movement between two securities or two indices. Correlations range from 1 (a perfectly positive relationship), to −1 (a perfectly negative relationship). Put another way, the stronger the relationship between two securities, the farther away from 0 their correlation will be. Using correlation matrices, Markowitz was able to demonstrate that combining more than one low-correlation assets can often enhance risk-adjusted returns as a whole. However, to fully capitalize on this theory, the investor must clearly understand the relationship between the various assets used to construct a portfolio.

In both the equity and debt markets research analysts, securities traders and regulatory agencies all influence the quantity and quality of information available on various asset classes and individual securities. A great deal of research is devoted to the largest public companies, and the industries in which they compete. For example, GE is covered by 19 equity research analysts, Microsoft by 31, and Exxon Mobil has 22 analysts that provide 2006 earnings estimates. ² In comparison, many of the smaller less widely held companies receive little or no attention from the research community. These companies are commonly described as orphans; publicly held, but with little incentive to remain as such.

Generally speaking, the broader the research coverage and the higher the public scrutiny, the less likely a company will adversely surprise investors, and the correlation between the company and its performance-influencing factors will become more transparent. With less coverage, smaller companies tend to provide greater surprises, both positive and negative to the market. This creates volatility in their equity performance, which increases beta and decreases correlation with broader indices.

In the middle market, the majority of companies are not publicly held, and many are significantly smaller than many small-cap public companies. This greatly reduces the availability of quality, independent information on both individual companies and their respective competitive landscape. This can be

² As stated on Yahoo! Finance, May 1, 2006.
problematic from a risk management perspective, and can make accurate and timely decision-making on transactions related to the middle market very challenging. Consequently, both marketing and risk management professionals often rely on readily available large corporate research as a proxy for a given middle market company or their respective industry. The remainder of this essay will outline some of the primary factors that can make this practice less effective as a tool for risk management, and propose some of the mitigants that can serve to offset some of these risks.

II. Characteristics of the Middle Market that Reduce Correlation to the Large Corporate Landscape

Many financial institutions broadly define the middle market in terms of revenue. This market typically encompasses companies with at least $10-20 million in annual sales, but no more than $500 million, and less than $50 million in EBITDA. The middle market is exceptionally inclusive, incorporating public and privately held companies across virtually all industries. This makes it very challenging to identify core characteristics of the market as a whole. However, the majority of common traits that link the middle market are centered around scale, strategic resources, and competitive position. In many cases it is the company-specific risks related to these three categories that reduce the correlation of operating performance between large corporate and middle market competitors, even in the same industry.

A. Scale of Operations

As described above, scale is one of the primary characteristics of the middle market. Across virtually all industries, the middle market seldom exceeds $500 million in annual revenue, and more importantly, less than fifty million dollars in cash flows as measured using EBITDA. This in turn limits the scale and scope of a given company’s operations, as a finite level of revenues can only produce a certain level of cash flows, regardless of the cost structure of the company and its industry. This will naturally limit the scope of a company’s operations and reduce the company’s financial margin for error. These factors can cause a company to behave radically different from larger competitors when faced with similar situations.

The scope of a companies operations can be measured in variety of ways, including market share, customer base, addressable market, geographic footprint, and product offering. For most middle market companies, they compare unfavorably to their large corporate competitors from a perspective of scope. For example, most middle market companies do not enjoy the customer diversification, number of customers, or product extension into multiple end markets the way their large corporate peers do. Similarly, middle market companies typically compete with a narrower product offering into a smaller addressable market than larger competitors.

Since many middle market companies lack the scale and scope of operations to generate the revenue base of a large corporate competitor, they typically have a reduced margin for financial error. For example,

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missing a product cycle or delaying the introduction of a new product can cause customers to move to a more modern, alternative product offered by a competitor. Losing a key customer can more significantly impact the overall profitability of the company. The time frame for investing in a new product or new market can be greatly reduced when that investment is a drain on the business as a whole.

As a result of limited scale and a reduced margin for error, many middle market companies operate under a higher degree of stress. When incorporated with the human element of a management team, this stress can produce unpredictable results. Management can respond more at an emotional level to the potential defection of a key customer, and bid a product at a price below their ability to generate a profit. Management can also mismanage success, and not have the controls in place to manage costly growth in a new market or with a new client. In comparison to the operating environment of the typical middle market company, larger corporate competitors frequently enjoy greater diversification in terms of customer base, addressable market, and product offering. These larger competitors are much more like a diversified portfolio of middle market companies that all cooperate toward a common competitive goal.

From a risk management perspective, these larger companies enjoys a higher degree of diversification of cash flows, and have greater financial flexibility. In comparison, the risk profile of a middle market company often resembles the performance of a single security, with greater volatility in its financial performance due to a lack of diversification. Since most equity and credit research focuses on the global risk profile of a company or industry, most research fails to drill down to the factor-specific influences that make up the composite outlook for a large corporate company. Factor-specific analysis requires that the risk manager is able to correctly identify those risk-influencing factors that are shared between the large and middle market companies and closely correlate to financial performance. Otherwise, the risk manager may incorrectly assess the risk profile of the middle market company using risk factors relative to the larger competitors but completely unrelated to the middle market company under consideration.

B. Limited Access to Strategic Resources

It is difficult to determine whether a reduced scale of operations limits access to strategic resources, or if limited access to resources is what inhibits growth. It is clear that for many middle market companies, these two characteristics are interrelated traits impact their operations on a daily basis. Like most larger companies, middle market competitors are constantly vying for access to various forms of capital, human resources, and the management talent to effectively leverage their assets and strategic positioning. However, for middle market companies, they face a different competitive landscape when it comes to sourcing additional resources in each of these broad categories.

For middle market companies, it is very common to have severely limited access to capital when compared to large corporate competitors. Most large corporate companies are publicly listed, and can access the common stock equity markets, while the middle market typically cannot. Instead, middle market
companies must look to specialty investment firms in the private equity market or wealthy individuals for equity. Large corporate companies also enjoy greater access to the various debt markets. Due to both their scale and low-relative risk profile, these firms can often enjoy a more permissive credit structure for the debt they procure.

From a relative basis, even having access to debt at comparable multiples of cash flows naturally favors large corporate competitors. For example, assume the middle market and large corporate markets were both to largely limit senior debt to EBITDA leverage to 2.0x. In this case, a large corporate company in a moderately risky industry with $100 million in EBITDA could access $200 million in senior debt to fund a major project or acquisition. Similarly, the middle market company with $25 million in EBITDA could access $50 million in senior debt.

However, the large corporate company can likely implement this financing under a revolving structure with little required amortization, provided they are in compliance with their covenants. Using a 7% interest rate, this would produce only $14 million in required debt service on an annual basis. For the middle market company, it probably has to amortize the debt over a reasonable time frame, perhaps five years. For the sake of simplicity, we will use the same 7% interest rate for both companies (in reality the large corporate company would probably enjoy a lower rate than the middle market company). The table below summarizes debt service for both companies:

<table>
<thead>
<tr>
<th>($ in 000s)</th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market</td>
<td>Large Corporate</td>
<td>Middle Market</td>
</tr>
<tr>
<td>EBITDA</td>
<td>$100,000</td>
<td>$25,000</td>
</tr>
<tr>
<td>Senior Debt</td>
<td>$200,000</td>
<td>$50,000</td>
</tr>
<tr>
<td>Debt/EBITDA</td>
<td>2.00x</td>
<td>2.00x</td>
</tr>
<tr>
<td>Amortization</td>
<td>$0</td>
<td>$10,000</td>
</tr>
<tr>
<td>Interest @ 7%</td>
<td>$14,000</td>
<td>$3,500</td>
</tr>
<tr>
<td>Total Debt Service</td>
<td>$14,000</td>
<td>$13,500</td>
</tr>
<tr>
<td>Debt Service as Percentage of EBITDA</td>
<td>14.0%</td>
<td>54.0%</td>
</tr>
</tbody>
</table>

As you can see from the final row above, even under artificially equal interest rates, the middle market company is likely to be required to devote a much high percentage of its cash flows to debt service. This would significantly reduce the middle market company’s margin for error in making a debt-financed investment. For the large corporate company, the financial flexibility it has access to becomes a defensive mechanism, enabling the company to use free cash flows to further invest, de-lever, or build liquidity for the future. It is this kind of analysis that makes it very challenging to take large corporate industry norms and apply them to significantly smaller companies without assessing the relative financial impact to the middle market client.
From a more qualitative perspective, middle market companies are also at a competitive disadvantage when competing for human capital, both in terms of a high-quality management team to provide strategic thinking, and a company-wide workforce to implement their strategies. For a general workforce, larger public companies have the negotiating power of a large employment base to reduce the cost of healthcare, financial services, and other benefits to employees. In comparison, pensions, 401(k)s, profit-sharing and affordable family healthcare are not nearly as common for middle market employees. For many US workers, this can be a major deterrent to accepting a position with a middle market employer.

Setting aside the benefits package, for senior management, the equation is not nearly so black and white. The large corporate company offers a widely recognized brand name, with greater prestige and professional marketability when the executive considers alternative positions. On the other hand, the management team of the typical middle market company is much smaller, affording the executive greater opportunities to contribute in a wider capacity to the company’s success. This is the classic case of being a big fish in a small pond, versus a small fish in a big prestigious pond.

Regardless of the motivations that lure executive management to either the large corporate or middle market, it is widely accepted that the typical middle market company lacks the depth of management at the executive level. In addition, they often lack the operational management staff to effectively implement strategy. In many cases, the middle market company is family-owned or closely-held, with only a handful of people playing a huge role in the overall success of the company. This exposes the middle market company to a much higher degree of company-specific risk, where an adverse event that occurs within the management team has a sizable impact of the company. For example, the unexpected death of a company president, or the defection of a key operational manager can leave a middle market company scrambling or lacking direction. In comparison, large corporate companies largely enjoy management team depth, the support of an independent board or directors, and an adequate operational-level middle management team to weather the loss of one or two key executives.

From a risk management perspective, the nature of these risks make it much more challenging to accurately benchmark middle market companies from a financial perspective. What can be very reasonable and manageable for large companies can be a much riskier undertaking for middle market companies, even when transactions are conducted on comparable scales. These risks are compounded by the fact that without a deep and talented management team, many middle market companies lack the human capital to effectively manage through a transformational transaction like a sizable acquisition. Risk managers are must address this risk head on, understanding the contingency plans of the middle market client, ensuring as best as possible that all reasonable downside scenarios have been discussed with the client.
C. Competitive Positioning
One of the clearest distinguishing characteristics of the middle market is competitive positioning relative to both larger and smaller companies. Similar to both larger and smaller competitors, middle market companies often compete through product differentiation and price. However, in the middle market, companies usually are usually forced to be more reactive to their competitive environment, rather than to dictate the terms of their positioning.

When it comes to competing through product differentiation, middle market companies often elect to compete in a focused, niche part of a broader market. Given the resource constraints previously outlined, many of these companies find it easier to specialize in either a narrow product set or a select target market. This can enable middle market companies to more effectively compete against larger companies that have sufficient resources to offer more products to a wider audience.

This niche approach can enable smaller companies to compete and even thrive, but it can also be problematic from a risk management perspective. When a larger company’s risk profile is used to benchmark a middle market company, many of the core risk characteristics of the industry—barriers to entry, strength of suppliers, strength of buyers, et cetera—can all be broadly applied to the middle market company. However, the larger companies are usually much more diversified, with multiple product offerings and a wider target market. Take for example the grocery industry, and the large super-regional grocer Kroger. It operates 2,507 supermarkets, 791 convenience stores, and 428 jewelry stores across the Midwest and Western states. Using a variety of brand names, Kroger has successfully built a $60.55 billion company that generated $3.3 billion in EBITDA in the year ended January 28, 2006.

Kroger is one of the largest grocers in the US, yet it faces very different market forces from a niche player like Trader Joe’s, Whole Foods, or other specialty grocers. While both have grown beyond the traditional definition of a middle market company, these two companies thrived as smaller specialty competitors for many years against much larger competitors. Even now, Trader Joe’s is a company with an estimated $4 billion in revenues and only 250 stores in the US.

More importantly, Trader Joe’s holds a very different niche in the grocery business, focusing primarily on specialty and ethic foods, prepared frozen meals, and luxury foods at a reasonable price. Their target market is the time-constrained, dual-income younger age group, down-sizing families with older children transitioning out of the home, and retirees. This company faces very different competitive pressures relative to Kroger, which is directly threatened by Wal-Mart’s encroachment into the price-sensitive,

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5 As reported in the Company’s 2006 10-K.
6 2004 revenues as reported on Yahoo Finance, Link: http://biz.yahoo.com/ic/47/47619.html
volume-based, diversified supermarket business. However, may Trader Joe’s face a higher degree of seasonality, as many no-core customers are known to splurge on discretionary items stocked at the store during the holidays. Trader Joe’s is also somewhat limited in its product offering by its strategy of primarily stocking private-labeled goods, which could limit its addressable market.

Another key difference between large corporate and middle market companies is the ability to influence the market price for a given product. It is more common to see the largest players in an industry benefit from a relatively stronger negotiating stance than smaller competitors. The larger companies typically enjoy a large and diverse customer base across a portfolio of product lines. Take for example Dell Inc. As one of the largest retailers of PCs in the world, Dell enjoys approximately a 4% market share in a $1.4 trillion industry.\(^7\) While that may seem like a small percentage, it is huge compared to other direct marketing retailers such as Gateway ($4.1 billion), or Apple Computer ($17.3 billion). Through sheer sales volume, Dell has been very successful in driving the market price of PCs down, and has forced competitors to look for other ways to compete. Apple successfully combats this pressure through skillful marketing to a counter-mainstream market, and delivers what is widely considered to be premium functionality over the lower-cost product lines offered by Dell.

In a similar fashion, middle market companies in a wide range of industries do not enjoy the ability to dictate the market price. Instead, they are price takers. As such, it can be difficult to profitably manage growth; when a middle market company wants to expand, it may add staff, or make capital investments. Both can increase fixed costs before revenues have the time to grow and stabilize operating margins. If during that time, the market price were to move adversely, the middle market company could find itself suffering losses. In comparison, larger, price-influencing companies can better manage their investments relative to a more predictable, managed price for their product.

This last point becomes a paradox for risk managers that specialize in the middle market. Virtually all business owners, investors, and the media view growth as a positive development. However, for many middle market companies, effectively managing growth is very difficult, due to the lack of management depth, lack of financial resources, and difficulty accurately anticipating price movements for their products. Compounding this risk is the fact that with rapid growth, even smaller middle market companies can become a competitive threat to large corporate companies in a given market, which can cause the larger competitor to focus more effectively shutting the smaller player out of the market. To the risk manager, declining revenues and profitability are obviously a problem, but rapid growth can be equally problematic. It may be the case that consistency and stability may be the ideal risk profile.

\(^7\) As reported in Dell, Inc.’s 2006 Annual Report. Percentage Calculated using $55.9 billion in revenues, relative to a $1.4 trillion industry.
III. Key Mitigating Factors for Middle Market Companies

We have now discussed some of the key risk factors that can make it difficult to apply large corporate research, knowledge and standards to the middle market. From a risk management perspective, it is also very important to understand some of the key mitigants commonly employed to offset these risks. In particular, the character of management and high quality access to these senior managers can play a powerful role in reducing the risks associated with middle market companies, and are briefly discussed below in the context of risk management.

A. Character of Senior Management

Much of risk management from the credit perspective centers around qualitative factors, cash flow, collateral, and such. However, one of the most powerful risk factors is the character of senior management. With the well-publicized incidents surrounding Enron, Worldcom, Tyco and other household names, character and ethics have become critical factors for risk management at all levels of business.

However, the middle market does not benefit from the level of public scrutiny associated with the typical public company, and senior management does not face the added personal financial liabilities created by Sarbanes-Oxley for public filers. As a result there is greater potential for financial misrepresentation, the misappropriation of funds, and other deliberately unlawful acts. That is why the character and intent of senior management can be such a powerful factor for risk management.

Working with an honest partner, often the personal of owner of the business they run, can be strong positive factor for risk reduction. As the owner of their business, many of these managers take a longer view of their investment, and are very aware of their reputation in the community. They are often conscious of their legacy, and are working to build a lasting business for their business partners, children, or employees. With a smaller management team, the owner can more directly impact their culture and mindset on the company, and influence more of the work force they employ. In such instances, the fact that these companies are smaller and heavily influenced by ethical leadership can serve as a benefit to risk managers. Understanding the motivation and ideals of senior management and the ownership of a middle market company and seeing those beliefs in action across their workforce is critical to successful risk management.

B. Greater Access to Senior Management

Building on the concept of a strong management team, it is equally important for risk management to have quality access to the senior management team of the clients they serve. Unlike large corporate companies, middle market clients typically employ much smaller management team, which are often locally based relative to the risk manager, and there is a much clearer understanding of who the risk manager can turn to for information.
In larger companies, the division of financial responsibilities is often divided between a chief financial officer and a controller, often with treasurers, and a range of assistants reporting to these senior managers. Each member of the financial team is likely to be an expert in their respective duties, but only the chief financial officer may have a global view of the company’s financial performance. Without frequent, direct access to that person, the risk manager may not be fully aware of the risk profile of the company on a real-time basis.

In comparison, with a smaller financial team, often one chief financial officer and perhaps an assistant or two, the senior manager of finance in the middle market is likely to be well-versed in all aspects of the company’s financial operations. When this person is locally based near the risk manager, it enables the risk manager to have more frequent, direct interaction with that manager. The middle market manager can often address questions and concerns more directly, because they personally track performance and generate the reports provided to the risk manager.

In a similar fashion, interacting directly with the owner or chief executive officer of the middle market client can also benefit risk management. Being able to discuss the owner’s plans for growth, competition and industry trends can be insightful and highly beneficial. Understanding the owner’s criteria for investment, risk tolerance and patience can all help the risk manager understand the mindset of the senior management team and their ability to effectively compete in the marketplace. It is this combination of frequent and open communication between senior management and the risk manager that can significantly offset some of the risks previously identified, as well as many others.

**IV. Conclusions**
The wealth of industry and company-specific research and data pertaining to larger, public companies can be very beneficial for risk management purposes. It can offer insight into broad trends, industry dynamics, forecasts for specific competitors, and the competitive issues facing all players in a given market segment. However, as pointed out in this essay, it is critical to understand where middle market companies fit into their respective industries, and how they positioned themselves within their competitive landscape. It is important to recognize that these middle market companies lack the scale and strategic resources to successfully compete against larger competitors for an extended period of time.

On the other hand, have greater access to senior management can enable the risk manager to gain a much more in-depth understanding of how their middle market client has historically competed. More importantly, without the highly restrictive limitations imposed on public companies regarding non-public information, the risk manager can freely ask the middle market client for a wide range of forward-looking data from senior management. In conclusion, it can be very misleading to directly apply research gathered from a large corporate perspective to a middle market client’s situation, and should only be done with thoughtful consideration.