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INSTRUCTORS' NOTES

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LETTER FROM THE EDITORS

Welcome to the *Journal of the International Academy for Case Studies, Special Instructors' Edition.* The International Academy for Case Studies is an affiliate of the Allied Academies, Inc., a non profit association of scholars whose purpose is to encourage and support the advancement and exchange of knowledge, understanding and teaching throughout the world. The purpose of the IACS is to encourage the development and use of cases and the case method of teaching throughout higher education. The *JIACS* is a principal vehicle for achieving the objectives of both organizations. The editorial mission of this journal is to publish cases in a wide variety of disciplines which are of educational, pedagogic, and practical value to educators.

The Instructors' Notes contained in this volume have been double blind refereed with their corresponding cases. Each case for which there is an Instructors' Note contained herein has been previously published in an issue of the *Journal of the International Academy for Case Studies*. Each case was required to have a complete teaching note before consideration. The acceptance rate for manuscripts in this issue, 25%, conforms to our editorial policies. This publication also conforms to the AACSB requirements to publish case notes which are considered by that body to be of more academic value than the case itself.

The Academy intends to foster a supportive, mentoring effort on the part of the referees which will result in encouraging and supporting writers. We welcome different viewpoints because in differences we find learning; in differences we develop understanding; in differences we gain knowledge and in differences we develop the discipline into a more comprehensive, less esoteric, and dynamic metier.

The Editorial Policy, background and history of the organization, and calls for conferences are published on our web site. In addition, we keep the web site updated with the latest activities of the organization. Please visit our site and know that we welcome hearing from you at any time.

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CASE NOTES

CREATING CUSTOMER VALUE AT ROCKY MOUNTAIN FIBERBOARD

John J. Lawrence, University of Idaho
Doug Haines, University of Idaho
Michele O'Neill, University of Idaho

CASE DESCRIPTION

The primary subject matter of this case concerns strategic planning, strategy formulation, and the alignment of functional strategies with the overall business strategy. Secondary issues examined include the incorporation of societal & environmental needs into business decisions, the strategic issues associated with staying focused, and bankruptcy. The case has a difficulty level of five. It is best suited for use in graduate level or advanced undergraduate courses given the scope of the difficulties the company faces and the complexity of the situation described. It is ideally suited for use in a capstone strategic management class because it requires the student to deal with strategic marketing, production and financial issues in an integrated manner. The case could also be used in a capstone marketing course, a small business management course, or in an entrepreneurship course. The case has been designed to be taught in 75 to 90 minutes and is expected to require four to five hours of outside preparation given the detailed financial analysis that can be done.

CASE SYNOPSIS

Rocky Mountain Fiberboard (RMF) produced particleboard out of bluegrass straw. It was established in 1999 as a joint venture between a processor of bluegrass seed and a Northwest American Indian Tribe. RMF was created to help solve the problem of waste bluegrass straw and was also part of the Tribe's effort to diversify the economic base of its reservation. RMF, however, experienced significant difficulties. It had lost $1.9 million in 2001, had $4.5 million in debt, and had no real working capital. Its Tribal owners were putting $42,000/month into the company to keep it going. While a pending grant application with the U.S. Department of Agriculture offered hope of reducing its significant debt burden, the business was also experiencing difficulties attracting and retaining customers and was experiencing significant quality problems. Luke Waterman, a trusted Tribal member who was in the process of completing a business degree at a nearby university, had recently taken over as general manager and was faced with the task of

overcoming the considerable financial, marketing, and production problems the business faced. Luke was considering three options: (i) identifying additional funds to undertake a focused marketing effort and to implement process improvements in production; (ii) acquiring equipment and licenses to produce another product - wall panels - that would use RMF's strawboard; or (iii) declaring bankruptcy.

INSTRUCTORS' NOTES

Recommendations for Teaching Approaches

The case can be used to illustrate a number of business principles and accomplish a number of teaching objectives. These include:

- Illustrate the problems that can arise when a new business venture does not adequately research the assumptions upon which its strategy is based.
- Highlight the need for alignment between key business decisions (across all functions) and a firm's intended business strategy, and illustrate the problems that can occur when such alignment does not occur.
- Show why a business established to satisfy societal/environmental needs still needs to be built on a market-driven strategy that creates value for customers.
- Show how the analysis of financial and production data can lead to a better understanding of the strategic capabilities of a business.
- Illustrate the need for a firm to understand its competitive environment and the basis upon which it might build a competitive advantage within this environment.
- Provide the basis for a discussion of the pros and cons of staying focused. One alternative in the case would shift the focus of the business and add complexities to the management of the business but make limited contribution toward solving core business problems.
- Provide a context to discuss what bankruptcy really involves and when bankruptcy should be considered as a serious option.
- Illustrate both the integrated nature of the different business functions and the need for business problems to be addressed cross-functionally. Doing this highlights the importance of a general manager being able to understand finance, marketing, and production issues.

The following questions are designed to take the class through a discussion of the case. Answers and some teaching suggestions are provided for each question.

1. What are the major challenges that RMF faces currently?

- few remaining customers;
- market does not appear to perceive that product differs significantly from traditional wood particleboard;
- inability to obtain premium price for product while simultaneously costs exceed those of competitor;
- lost $1.9 million on sales of $1.7 million last year;
- production equipment is old, low volume and less automated than competitors;
- $4.5 million in long-term debt, of which $950,000 is current, plus over $800,000 in payables;
- quality problems lead to downgrading as much as 20% of certain product types;
- significant loss of a raw material, straw, during storage;
- business requires cash infusion each month from the Tribe to operate;
- the organization has been forced to lay off the majority of its employees;
- the organization currently has no marketing/sales manager;
- there appears to be a need for significant investment to refurbish basic production equipment;

2. Describe how RMF has presently positioned itself and its product. Identify and contrast the strategy RMF intended to follow with the strategy that eventually evolved.

Question #1 starts the discussion off by identifying the current challenges facing the firm. Question #2 is designed to clarify the current strategy for the students and establish why the firm faces the challenges that it does. Two important strategic lessons can be brought up in this discussion. The first lesson is that the assumptions upon which a strategy is built need to be tested to insure their validity. Otherwise, faulty assumptions can easily lead to a weak strategy. The second lesson is that the firm must take care to take actions and decisions consistent with its intended strategy. If this does not occur, the strategy that emerges from these actions and decisions will differ from the strategy it intended to follow.

RMF was formed to produce strawboard to provide bluegrass growers an outlet to sell straw refuse as well as to diversify the Tribe's economic base. The original, intended strategy was to sell strawboard as a high-quality "green" product. RMF planned to capitalize on its location in the Northwest and believed that a small plant would allow it to be more flexible and have lower costs than traditional wood particleboard producers. The case indicates that RMF expected it could find customers because strawboard plants in North Dakota and Kansas consistently sold out of product and there were no plants in the Pacific Northwest. It viewed itself primarily in competition with wood particleboard plants and

viewed its product as being a superior substitute to wood particleboard. The case also states that RMF's original informal business plan called for initially pricing at a discount and then raising the price to a premium level after gaining market share, broadening its acceptance, and proving the product to be of high quality.

Yet, the case states the original business plan was quickly developed, indicating that no time was invested in conducting market research to fully understand the industry, product fit, or potential customer base. In essence, RMF assumed, without research, that to-be-identified customers would understand and value strawboard's unique characteristics and would be willing to pay a premium for "green" boards. It also assumed that this premium would cover operating and financial costs, neither of which was well understood. As a result, the company invested significant money without an adequate business plan nor an understanding of the risks involved.

While basic research would have shown that at least some of these assumptions were faulty (e.g., that costs would be lower than those for particleboard or that potential customers would easily understand and value strawboard's unique characteristics), it is unclear whether this intended strategy could have succeeded because many decisions seemed to have been made without an understanding of their strategic significance. For example, RMF purchased smaller, less automated, less flexible production equipment than competitors', hired a production manager with little managerial experience or training, and failed to adequately plan for the effective storage of its basic raw material (i.e., straw). All of these decisions contributed to lower product quality and higher production costs. Likewise, RMF hired a general manager with no business experience and hired a series of marketers with no experience in selling non-commodity, new-to-market products. As such, the company experienced ongoing difficulties adequately differentiating its product from its competitors and establishing a consistent, high quality brand image.

As a result of decisions like these, the resulting emergent strategy directed the firm away from introducing and producing a high-quality product for which it could charge a premium price and towards producing, in a costly manner, a commodity of inconsistent quality. The emergent strategy lacked focus and consistency. Decisions were made and actions taken without an understanding of what needed to be accomplished for the firm to be successful; thus, there was no opportunity for a hierarchy of strategies to develop that supported the intended strategy. For example, the decision to purchase the older, lower volume production equipment was made based on its availability and low price, rather than on its capabilities relative to achieving certain goals. (Additional details on the issue of "Intended" vs. "Emergent" strategies can be found in Hill and Gareth (1998).)

Once students identify the intended and emergent strategies, and understand the differences between them, they can better appreciate what type of firm RMF has become and

the type of product it is actually producing. This provides students a foundation upon which to determine what RMF has to offer the marketplace presently, in spite of its intended goals.

3. Conduct partial "Common Size" analyses with the various financial statements. What do the analyses indicate about the situation in which RMF finds itself?

Questions #1 and #2 are designed to help students understand the qualitative issues surrounding the case. This question is meant to help students methodically break down the factors underlying the financial problems. By doing so, students will not only become familiar with financial statement analysis, but also form sound financial reasons upon which to develop any action plans.

Asking students to calculate relative percentages for various accounts (a form of Common Size analysis, in which accounts for a given financial statement are made percentages of one other account) will help them begin to determine which elements of the business are contributing to the current financial situation. As a result, the students will have identified those elements that need to be changed, and how, when they analyze each of the options before Luke.

Exhibit TN-1 presents five different analyses that could be conducted. First, students are asked to develop ratios with each of the raw materials as a percentage of Direct Materials Used using the Cost of Goods Manufactured statement. For example, resin's ratio would be calculated as {(beginning inventory + purchases - ending inventory)/ Direct Materials Used = ($37,440+$560,928-$0)/$1,154,748}. This allows the students to determine relative raw material-to-input costs and shows, contrary to possible expectations, that the cost of straw is not the biggest element. Second, using the same statement, students are asked to develop ratios with each of the three major cost inputs as a percentage of Cost of Goods Manufactured. When done in conjunction with the first analysis, this deepens understanding of the role that the raw materials play by showing how the cost of direct materials drives the overall cost of manufacturing relative to the costs of direct labor or manufacturing overhead. Third, students are asked to use the Income Statement and calculate the components of Operating Expenses as percentages of all operating expenses. Operating Expenses are purposely separated into four categories, rather than collapsed into the commonly used catch-all account, Selling and Administrative Expenses, to emphasize the disparity between expenses going towards administrative accounts (88% of Operating Expenses) instead of selling or marketing or research efforts. Fourth, students must determine the relative percentages of the component accounts under Current Assets on the Balance Sheet, and this highlights additional issues. Of RMF's Current Assets, almost 59% are tied up in inventories. Finished Goods accounts for 55% of Current Assets and, as mentioned in the case, this inventory is composed mainly of downgraded shop and utility boards for which

there are no customers. Lastly, comparable analysis on the Current Liabilities shows that looming debt payments are a concern.

Exhibit TN-1 Partial Common Size Analyses	
Relative costs of raw materials as a percentage of direct materials used	
Resin	51%
Straw	37%
Propane & Nitrogen	8%
Release Agent	4%
Material, labor and overhead as a percentage of cost of goods manufactured	
Direct Materials	44%
Manufacturing Overhead	30%
Direct Labor	26%
Individual operating expenses as a percentage of total operating expenses	
Administrative	88%
Research	9%
Selling	2%
Marketing	1%
Individual current assets accounts as a percentage of total current assets	
Finished Goods	55%
Cash	24%
Accounts Receivable	17%
Raw Materials	4%
Individual current liability accounts as a percentage of total current liabilities	
Current Debt	53%
Accounts Payable	47%

4. Conduct a breakeven analysis for RMF. What types of changes would have to occur at RMF to reach these levels of breakeven performance (be as specific as possible and include, but don't limit yourself to, issues of pricing, quality, material cost, and labor)?

Having students conduct a breakeven analysis will help them realize how serious the problems are that the company faces. Students will need to use the 2001 Income Statement

and the Cost of Goods Manufactured statements provided in the case to do this analysis and will be required to use their judgment to make some assumptions about what would be considered fixed costs and what would be considered variable costs. Exhibit TN-2 shows the assumptions that are used in this instructor's note.

Exhibit TN-2
Assumed Classification of Costs as Fixed or Variable for Breakeven Analysis

Variable Costs	
Cost of Direct Materials Used	$1,154,748
Cost of Direct Labor	675,712
Manufacturing Overhead	
Equipment Repair & Maintenance	131,701
Plant Electricity	69,912
Production Employee Taxes, Benefits & Insurance	120,560
Miscellaneous Factory Consumables	36, 196
Off-cut & Waste Straw Disposal	9,568
	_____
Total Variable Costs	$2,198,397
Fixed Costs	
Manufacturing Overhead	
Contract Management	$41600
Depreciation, Building & Plant Equipment	320,615
Building & Equipment Lease Payments	43,706
Miscellaneous Factory Supplies & Services	15,372
Training	4,141
Selling & Administrative Expenses	290109
	_____
Total Fixed Costs	$715,543

This exhibit shows that for 2001, RMF's total variable costs were $2,198,397 and total fixed costs were $715,543. Total sales were $1,767,435 (from Exhibit 2 of case). This figure includes freight charges of $354,601. RMF priced its boards FOB factory, then arranged transportation of the boards for those customers who wanted delivery included and added this cost to the bill. As such, it is deducted from the sales figure for purposes of conducting a breakeven analysis, giving

an adjusted total sales figure of $1,412,834. Students should recognize from this that RMF could not solve its problems simply by increasing volume, as variable costs exceed sales levels by $785,563 or by 56%. From this analysis, it is clear that RMF needs to find a way to significantly reduce costs and/or significantly increase prices to have any chance of reaching breakeven. The instructor can then press the students to critically evaluate RMF's situation to assess what it would take to reduce costs or increase price. Basically this discussion forces the students to consider what types of functional strategies the business should pursue in operations and marketing if it hopes to break even producing and selling basic strawboard. These issues (costs & prices) can be addressed in either order, but both sides of the equation need to be addressed to fully appreciate RMF's situation.

Starting on the cost side, the Cost of Goods Manufactured and the detailed description of the production process provided in the case provide students a good opportunity to dig into the cost side of the equation. Further, the Common Size analysis completed in Question #3 provides students with a better understanding of the relative importance of the different manufacturing costs. One approach to carrying out this discussion is to attempt to develop a list of changes that would allow RMF to reduce its costs to where it could at least cover all of its variable costs. One such scenario is shown in Exhibit TN-3. Clearly students will not be able to know the exact percentages of improvement that are possible, but the point is to explore both the opportunities that exist and the magnitude of change needed.

Exhibit TN-3
One Scenario That Allows RMF to Cover Variable Costs

Change #1:	Eliminate straw storage deterioration loss by changing straw delivery and/or storage arrangements. The Case states 15% of straw disposed of due to deterioration. The cost of that straw is (.15)($425,346).
	Savings from Change #1: $63,802
Change #2:	Improve production process to eliminate approximate 10% reject rate (classified as shop or utility board, which are difficult to sell, even at steep discount). The cost savings is (.10)($2,198,397-$63,802-$9,568). This represents 10% of all variable costs that are spent making low quality boards that end up as unsold inventory or scrap. Savings from straw deterioration & disposal deducted so not double counted.
	Savings from Change #2: $212,502
Change #3:	Completing changes #1 and #2 above eliminates off-cut and waste straw disposal cost. The value of this is taken directly from cost of goods manufactured statement.
	Savings from Change #3: $9,568

Exhibit TN-3 One Scenario That Allows RMF to Cover Variable Costs	
Change # 4:	Negotiate 50% reduction in the price of straw - the case states that waste straw is in abundance and rotting in fields. With competitive bidding RMF should get lower cost - possibly simply the transportation cost to Plummer since excess straw in fields deteriorates quickly and is of little value to others. The savings is (.50)(.90)($425,346-$63,802). This represents 60% of straw purchases after accounting for straw savings gained from changes #1 and #2 above.
	Savings from Change #4: $162,695
Change #5:	Negotiate 15% price reduction from vendors of resin (BASF), propane, nitrogen, release agent & packaging material. Bargaining position may be that it's better to sell to RMF at discount than not at all, or in the case of BASF, that a discount is justified to keep MDI resin competitive with alternative resins coming on the market. The savings from this is (.15)(.90)($560,928+$42,864+$94,178+$37,023). This represents 15% of all non-straw purchases after accounting for savings gained from change #2 above.
	Savings from Change #5: $99,224
Change #6:	Reduce repairs & maintenance expense by 50% by implementing ongoing, preventive maintenance program & selective equipment investment. The savings is (.50)($131,701).
	Savings from Change #6: $59,265
Change #7:	Improve labor productivity by 25% through process improvement efforts and possibly selective investment in equipment automation. The savings is (.25)(.90)($611,519+$120,526). This represents a reduction in both direct labor and production labor benefits, taxes & insurance, after allowing for change #2 above.
	Savings from Change #7: $164,710
	Total Savings from All Changes: $771,766

The instructor might want to start by discussing the high cost of the quality problems experienced in production and what might be done to address these quality problems. As shown in Exhibit TN-3 (items 1-3), the combination of rejected raw material (due to straw deterioration) and rejected finished product (due to 10% of boards that are downgraded on average) cost RMF $285,872 (i.e., $63,802+$212,502+$9,568) in 2001. This represents a source of significant savings if quality problems can be addressed. A portion of the Sales Returns and Allowances expense on the 2001 Income Statement would also likely disappear with significant improvements in quality. The case provides numerous examples of process upgrades that are needed to reduce quality problems. For example, new press platens ($100,000 for both lines), new cold plates ($30,000), better straw storage and/or delivery arrangements (no cost estimate given) and an upgrade for the sanding equipment (no cost estimate given) would help significantly to improve quality. Further,

students might suggest that more formal production procedures would help (e.g., the case indicates that when product density is found to be too high or low, the operator "might" adjust the process to try to compensate). Also, more training is needed (i.e., $4,000 in training for a company of this size seems low, particularly given the quality and productivity challenges the company faces). The annual savings ($285,000) that would result from these investments in better quality would likely cover the costs of the investments in less than a year.

This discussion of quality naturally leads into a discussion of labor productivity. The same informality and lack of investment and training and equipment associated with the quality problems also would suggest that labor productivity could probably be improved significantly. Students might also suggest additional training for Rich or the hiring of a new production manager with more management experience or training. It is also worth looking at labor costs as a percentage of sales. Direct labor costs are $675,712/$1,412,834= 47.8% of sales. This is an incredibly high percentage for a product that is essentially a commodity. Labor as a percentage of sales for businesses located in the U.S. is more typically 5%-15%. Products with such high labor content are usually either high end, "hand-crafted" items or are moved offshore where labor costs are lower. Labor productivity clearly needs to be improved for the company to reach breakeven.

From discussing quality and labor productivity, the instructor could move on to discussing the issue of purchasing. In terms of straw, the case states that there is an abundance of straw available and going to waste in growers' fields. While BGI clearly entered this venture to recover costs associated with baling bluegrass straw off growers' fields, it seems unlikely that RMF would have to pay this much if it sought competitive bids on straw and treated the company as an arm's length supplier. One could argue that RMF would be doing a service by removing straw from a grower's field and should be able to obtain the straw for what it costs to transport it to the factory. An even higher cost to RMF than straw is resin. The case indicates that MDI resin is three to five times more expensive than the urea-formaldehyde resin used in conventional wood particleboard, and this puts strawboard manufacturers industry-wide at a cost disadvantage. There are, however, three alternatives to MDI that are expected to become available within the next six months and have the potential to reduce resin costs for strawboard manufacturers. In the very short term, these alternatives might give RMF added bargaining power vis-à-vis BASF. In the longer term (i.e., 3-6 months out), these alternatives might provide RMF a significant cost reduction. Switching to soy-based resins, for example, could reduce resin costs by as much as 75% if it is indeed priced comparable to urea-formaldehyde resins that are on average four times more expensive than MDI. Because of uncertainties about the timing and the effectiveness of these new resins, the potential cost savings associated with them have not been incorporated into TN-3.

Looking at Exhibit TN-3, one can see that reaching profitability through cost cutting alone is not going to be easy. RMF would have to eliminate all of its quality problems, reduce the price it pays for straw by 50%, reduce the price it pays for other inputs by 15%, reduce equipment breakdowns by 50%, and improve labor productivity by 25% just to get to the point where it can

cover its variable costs. Even still, these drastic improvements would not begin to cover the $715,543 in fixed costs nor provide any operating profit to cover the $359,866 interest expense, let alone pay back outstanding loans. Further, achieving these levels of improvement would be unlikely to occur without additional capital for needed process improvements, which would increase liabilities. A little further out in time though, a switch to a new resin (e.g., soy-based resins) could further reduce variable costs by as much as $378,000 {(.75)(.90)(560,928)}. This, in turn, would provide RMF with some contribution to begin to cover fixed costs and/or interest expense.

In addition to cost cutting, students must also consider the possibility of increasing price to reach breakeven, even if they decide it is not possible. Strawboard appears to be a commodity product as it is a substitute for wood particleboard, which is already marketed as a commodity product. This presents an opportunity to discuss the pricing implications for commodity versus differentiated products. It is difficult to make a case for getting much of a premium for strawboard over particleboard. Environmental benefits are the primary additional benefit of strawboard versus particleboard, and one could lead a discussion about the challenge of convincing customers to pay more to support a cleaner environment. The case provides data on the green marketplace suggesting that the current premium of around 20% is about the most that RMF can expect to obtain unless it is able to further differentiate its product. The Wall Panel alternative does provide an opportunity to include strawboard in a value added, differentiable product. Note, however, that strawboard still does not have any unique property in this application compared to the more economical particleboard except that it is a "green" product.

5. Based on the preceding analysis and the industry and market information in the case, how might RMF create a competitive advantage for itself?

Questions #1 and #2 provide students with an overview of the current situation and an understanding of RMF's current strategy and how it came about. Questions #3 and #4 require students to do a detailed analysis of the production and financial data to better understand what RMF needs to do to get its revenues and costs more in line with each other. Question #5 is intended to provide a bridge between the detailed Common Size and breakeven analyses and the consideration of alternatives. That is, it asks students to synthesize the analyses, clarifying RMF's strategic strengths and weaknesses relative to competitors, in order to understand the basis upon which RMF might be able to build a competitive advantage.

Competitive advantage derives from creating superior value for customers, and this can be done by either driving costs down or by differentiating products sufficiently from competitors so that customers value them more.

The analysis completed so far indicates that RMF cannot compete on cost with particleboard manufacturers. These competitors have significant scale economies and

significantly lower resins costs, not to mention much deeper pockets to fund investment. New resins coming on the market, plus improvements in manufacturing and purchasing, however, do offer RMF some opportunity to reduce its costs so the cost difference between RMF and these large producers is not as great.

RMF's potential as a competitor to particleboard manufacturers, then, must come from how it is able to differentiate itself from its competitors in ways that customers value. Strawboard does have differences compared to particleboard, but the problem for RMF is that it has been unsuccessful at finding customers who value the differences and/or educating customers about the value of those differences. As Luke's research in the case indicates, this has been an issue for the strawboard industry overall.

Compared to other strawboard manufacturers, the cost picture is less clear (and was less clear to Luke and RMF). RMF's manufacturing costs are likely higher than those of other strawboard manufacturers because of its relatively small size (i.e., it lacks the scale economies of its strawboard competitors) and the inefficiencies in its production process as discussed in the preceding question. Improving operations offers the potential to significantly reduce this cost disadvantage. RMF, however, does have one significant source for a cost advantage compared to other strawboard manufacturers - lower shipping costs to the Pacific Northwest region by virtue of its location. While it is unclear whether this currently gives RMF or its competitors an absolute cost advantage (i.e., lower shipping costs that more than offset scale and efficiency advantages of competitors), students can determine that shipping costs are quite significant in the industry because RMF's freight charges are 20% of total sales. With improved manufacturing efficiency and improved purchasing practices, RMF might be able to achieve a cost advantage compared to other strawboard manufacturers for sales to the Pacific Northwest.

Finding a basis for differentiation compared to other strawboard manufacturers would likely be more difficult, as the product sold is physically so similar to the product of other strawboard competitors. RMF's smaller size might allow it to respond more quickly to customers or be more flexible than competitors, but there is no evidence in the case that RMF has found a way yet to capitalize on this. RMF might be able to gain short-term advantage over strawboard competitors by more quickly moving to one of the new resins coming on the market, which would give RMF both lower costs and a differentiated product (particularly if it switched to the soy-based resins).

In summary, then, RMF's basis for competitive advantage likely lies in its ability to better differentiate itself from particleboard manufacturers and its ability to provide its product to customers in the Pacific Northwest at a lower cost (and possibly with shorter lead time) than other strawboard manufacturers can.

6. What are the pros and cons of each of the alternatives Luke is considering?

Exhibit TN-4 provides a summary of the pros and cons of each of the alternatives that Luke is considering. Two important concepts should be emphasized when discussing these alternatives. One, RMF does not want to repeat its earlier mistakes. Specifically, the instructor should ask students whether an option is built on a foundation of pursuing RMF's intended strategy and creating value for an identified customer. Two, the instructor should raise the issue of focus. That is, does a suggested option broaden or narrow RMF's focus, and as a result, does that help or hinder RMF's efforts to be successful?

Exhibit TN-4
Summary of Pros and Cons of Options Under Consideration

Option 1: Focus on strawboard, possibly focus on furniture makers	
Pros	
	Allows RMF to focus on addressing current plant problems.
	Would allow RMF to avoid dealing with a distributor.
Cons	
	It is unclear whether additional investment money would be available from either the Tribe or an outside source.
	Furniture makers mainly use 3/4" board, which is the type of board that RMF has the most problems producing.
	Shipping costs would be a potential issue since most furniture makers are in the eastern half of the U.S.
	If RMF did stimulate interest from a furniture manufacturer, the manufacturer would probably solicit bids and RMF might lose the business to a closer, larger strawboard competitor that offers a comparable product at a lower price (i.e., PrimeBoard in North Dakota or Prairie Forest Products in Kansas).
	The financial analysis outlined above suggests that RMF cannot achieve profitability without receiving a significant price premium for its product relative to particleboard, which seems unlikely to occur.
Option 2: Production of wall panels	
Pros	
	Creates a higher margin product from strawboard.
	Generates sales for strawboard.

Exhibit TN-4
Summary of Pros and Cons of Options Under Consideration

Cons	
	OSB provides comparable or superior performance to strawboard in wall panel application and is cheaper to produce than is strawboard.
	The market is unlikely to pay premium for strawboard wall panels, and it may even expect to pay less for strawboard wall panels compared to OSB panels.
	It would introduce an entirely different production process that RMF would have to master.
	It would represent a different customer group than RMF is used to working with and would therefore require at least some changes in marketing/sales approaches.
	The shipping cost of wall panels is significant and RMF is located a considerable distance from major metropolitan markets (e.g., Seattle, Portland).
	Strawboard is not rated for exterior use so RMF would either produce only interior walls or would have to purchase OSB and build some wall panels partially or completely out of OSB.
	It would require some additional investment capital to obtain, move, and setup the production equipment needed to produce the wall panels.
	It would not address current cost and quality problems associated with production of strawboard and would likely divert management attention away from these issues.
	The production capacity of existing strawboard equipment is less than capacity of wall panel process.
Option 3: Bankruptcy	
Pros	
	The tribe will no longer need to put additional money into the business.
Cons	
	Bluegrass Growers, Inc.'s objective of finding a solution for dealing with leftover bluegrass straw is not achieved.
	The Tribe's objective of adding to the diversity of the reservation's economy is not achieved.

Discussion of the pros and cons can begin by using the earlier analyses of the current financial, production, and marketing situations, which suggest that simply producing the strawboard and finding new customers (e.g., furniture manufacturers) may not be enough to achieve profitability.

The discussion can then focus on the strategic benefits of changing the product offering by partnering with another organization to create a more differentiated value-added product. It is recommended that students be questioned as to whether the existing problems need to be solved

before the company is in a position to move toward the Wall Panel options. It is unclear whether the Wall Panel option simply adds greater complexity to the current situation without addressing the underlying causes of the current difficulties. To some extent it seems to follow the original motivation of trying to create a product (albeit a different one) out of the bluegrass straw residue, rather than being based on a careful evaluation of how RMF could create value for its customers. Further, this option represents an attempt to address the problem primarily from the sales side without providing a clear solution to the production problems. In addition, this option really doesn't address the market's apparent view that strawboard is, at best, comparable to traditional particleboard. Thus, the option would need to be viable at price levels that customers would expect if the wall panels were made from traditional wood particleboard.

Students also need to recognize that the first two options will require time to implement before they can deliver any real return to RMF's original investors. As such, if RMF pursues either of these options, it will need to work with its lenders and those it owes money to in the form of payables if there will not be new investment from some source (e.g., the Tribe, Bluegrass Growers, Inc., or an outside investor) to cover the liabilities.

The discussion of options can be concluded with a discussion of the consequences of and alternatives to bankruptcy. Although RMF was pro-active in seeking modified lending terms with Northwest Farm Credit Service, if the grant conversion request presented to the USDA is not approved, RMF could consider filing for bankruptcy under Chapter 11 provisions. Bankruptcy law is separated into "chapters." Under Chapter 11, a business petitions the court to approve a reorganization plan that it develops describing which creditors will be paid, how they will be paid, and how much will be paid. A firm has 120 days under which to get a reprieve from its creditors and develop the plan. After this six-month process, not only must both the judge and the creditors approve this plan, but also every business decision and cash flow movement thereafter must be approved by the judge and creditors. Moreover, obtaining approval for filing Chapter 11 bankruptcy requires RMF to show that in a reorganized form it could become a profitable business. This would be a difficult case to make given the results of the financial analysis outlined in discussion Questions #3 and #4 above. RMF would also need to have enough cash (typically $5,000-$20,000) to pay up front all legal fees associated with the bankruptcy proceedings. Chapter 11 bankruptcy is a long and difficult process if granted (fewer than 25% of Chapter 11 filings are approved). Reorganization experts say it should be a last option.

A Chapter 11 type reorganization can also be accomplished informally with creditors in what is commonly referred to as a workout. In such a workout, RMF would need to meet with all of its creditors collectively and try to present a plan that these creditors can collectively accept. Workout plans involve a restructuring of debt where creditors agree to either an extension of debt terms (i.e., interest and or principal payments are postponed) and/or a partial reduction of claims by the creditors (i.e., either accepting a lower principal amount, a lower interest amount, or taking equity in exchange for debt). Typically a firm would present several scenarios to creditors in such a

meeting (including a scenario of simply selling off all assets and closing the business) in an effort to convince creditors that accepting a debt restructuring is in their best interest. Creditors are at times willing to work out informal reorganizations like these because they tend to return more to creditors and can be completed more quickly than Chapter 11 reorganizations. Workouts are usually preferable to the firm involved because it allows for more managerial freedom (i.e., management does not need to have key decisions approved by the courts) and avoids the publicity and stigma associated with formal filings. The biggest challenge with informal filings is getting all creditors to agree to the plan. Because of this, informal reorganizations are most common among firms with only a few creditors. In this respect, RMF would be a good candidate for an informal reorganization given its limited number of creditors. The challenge, of course, would be developing a plan that would allow RMF to generate sufficient contribution to pay off at least a portion of its debt in the future.

Whether accomplished informally or through a Chapter 11 filing, reorganizations typically involve the following actions (Brigham & Daves, 2002, p. 844): (i) debt maturities are usually lengthened, interest rates may be lowered, and some debt is usually converted into equity; (ii) a new management team is given control of the company; (iii) obsolete or depleted inventories are replaced; (iv) plant and equipment is sometimes modernized; (v) improvements are made in production, marketing, advertising, and other functions; and (vi) new products or markets are sometimes developed to enable the firm to move from areas where economic trends are poor into areas with more potential for growth. Such reorganizations usually require an infusion of new money, often from a new investor. It is quite possible that all of the listed actions would need to be taken for RMF to win support for a re-organization. Through discussion of these issues, students should realize that a Chapter 11 (or informal) reorganization is not simply a case of taking the easy way out of the situation.

An alternative to re-organizing in this fashion is a simple liquidation. As in the case of reorganization, liquidation can be accomplished either informally or through the bankruptcy courts. An informal liquidation is usually accomplished through a process known as assignment, where the title to assets are given to a third party (i.e., a trustee or assignee) who is responsible for selling the assets and distributing the resulting money to creditors. Creditors can also force a firm into liquidation via Chapter 7 bankruptcy provisions. In fact, the vast majority of firms that apply for Chapter 11 protection are denied and instead forced into following Chapter 7 provisions. Under Chapter 7, the court closes the firm, liquidates its assets, and uses proceeds to pay off the creditors. If RMF does not resolve its operating problems shortly, creditors could choose to try to convince a bankruptcy court judge that liquidating the firm is the only recourse and force a Chapter 7 filing. Sufficient information is provided in the case for students to realize that the sale of RMF's assets would generate insufficient cash to pay off all creditors.

For instructors less familiar with the details of bankruptcy, many intermediate financial management books provide some coverage of this topic. Several useful references are also included

at the end of this document that deal with the issue of bankruptcy in more detail. The American Bankruptcy Institute website is a particularly valuable resource. Instructors may wish to point out to students skeptical about the importance of understanding bankruptcy that over 38,000 U.S. businesses either filed for or were forced to bankruptcy by their creditors in 2002.

7. What would you recommend Luke do? Why? How exactly would he do it?

The analyses in Questions #3 and #4 indicate that it would be extremely difficult for the plant to break even by continuing to produce strawboard, even if new customers could be found. Some students may support this option on the basis that core problems related to the strawboard business should be solved before the business attempts to create new products from the strawboard. In addition, some students may fall prey to "escalation," which arguably happened with RMF. That is, students may identify with Luke (a University student trying to help a small company) and be unwilling to give up on this venture, instead arguing for more time and resources. Students advocating this approach need to recognize that radical change and funding are required to make this option viable, escalating the financial commitment even more.

The Wall Panel option holds a little more hope for RMF because it provides the business with a more differentiated product that would justify a somewhat higher price and margin. RMF, however, lacks fundamental market and production data for either of these options to know just how much higher a price and margin are achievable. This raises the issue of "risk" and could lead to a discussion of whether RMF ever really considered whether it expected to earn a return on its project commensurate with the risk it was undertaking. Further, the Wall Panel option is potentially viable without RMF's strawboard (i.e., through the use of regular OSB).

Students who support the Wall Panel option should be challenged to make a case for why they would even use RMF strawboard in the product. In 2001, excluding freight, RMF produced $1,412,834 worth of strawboard. It spent, excluding freight and interest expense, $2,913,940 (fixed costs plus variable costs) to produce this much strawboard. The case states that OSB, the current material used to produce wall panels, is cheaper than strawboard. Students can be presented with the scenario of a wall panel business needing as many boards as RMF produced in 2001. If that business owned RMF's processes and used RMF strawboard, it would spend $2,913,940 (and be saddled with $4.5 million of debt and over $800,000 in payables) to obtain those boards. Instead, if it simply bought OSB by competitive bid, it would spend somewhat less than $1,412,834, for a savings of approximately $1.5 million (again excluding debt). Students then must answer the question of why they would spend $1.5 million more to acquire an input material. Going through this

scenario will make it clear to students that RMF can not escape addressing its current problems simply by incorporating its strawboard into another product.

This line of discussion may also cause students to ask why Quickstart would be interested in RMF. This is a good question, and takes the discussion back to the risk/return issue. Wall panels represent a relatively new product without an established market, and as such there is significant risk associated with them. The case indicates that Quickstart hired Stanford Financial to help it find an investor. Stanford Financial, in turn, approached the Tribe, knowing that the Tribe was looking for ways to create business diversity on its reservation and that it had money to invest in such ventures. The logical inference is that Quickstart is looking for an investor willing to take a significant risk. RMF, the Tribe and BGI need to assess whether the potential return is worth the risk.

This brings the discussion to bankruptcy and business objectives. Bankruptcy will be the easiest case for students to make, but this result fails to achieve either BGI's objective of finding a solution for dealing with leftover bluegrass straw or the Tribe's objective of adding to the diversity of the reservation's economy. One might legitimately argue that given the owners' objectives, the business need not achieve profitability. While this is true, the business does need to at least approach breakeven to satisfy the owners' objectives over the long-term.

It is interesting to consider both of these objectives in the context of the current financial situation. In 2001, RMF lost $1.9 million and ended the year over $5 million in debt including payables. This provided Bluegrass Growers, Inc. less than $425,000 in economic return for its straw (less because of straw purchases from Oregon Hay) and the Tribe with jobs on the reservation that generated a payroll of $740,000 {$630,000 (production labor) + $110,000 (office salaries)}. In total, the financial equivalent of these other benefits ($1,165,000) was well below the $1.9 million loss. Clearly this calculation does not include other intangible benefits associated with the venture (e.g., manufacturing experience gained by employees, the environmental value of putting the straw into a useful product instead of the landfill). However, it does make clear that the strawboard business is an expensive way to achieve these objectives. It is also interesting to note that two of the major areas suggested for improving RMF's financial picture - improved labor productivity and better straw purchasing practices - both reduce the achievement of these other objectives.

TEACHING PLAN

The discussion questions have been developed so that the instructor can use them in the order presented to lead the class through the case. The first question is designed to quickly engage the class and have students see the significance of the current problems that RMF faces. Question #2

is designed to clarify the current (emergent) strategy for the students and establish why the firm faces the challenges that it does. In a 90-minute class, we suggest spending about 20 minutes on these first 2 questions. Questions #3 and #4 send students into the detailed analysis and ask them to draw strategic conclusions from these analyses. Going through this discussion in the context of the financial statements forces students to quantify their thinking. Question #4 will require significantly more time to discuss, and instructors should be prepared for the fact that students will have made a variety of assumptions in attempting to understand what it will take for RMF to reach breakeven. We suggest allotting about 30 minutes of the class to these two questions. Question #5 helps focus the class on strategy as the discussion transitions from the quantitative analyses in Questions #3 and #4 to the evaluation of alternatives, and it should be allotted about 5-10 minutes.

We think it is worthwhile having this "ordered" discussion to more fully understand RMF's situation before discussing the alternatives. Students will probably offer statements early on in the discussion favoring one or another of the alternatives. However, delaying discussion of the alternatives allows the instructor to make the following point: the company would be likely to repeat its past mistakes unless it understands why it is in its current situation and what changes it would take to turn it around.

This leads to a discussion of the alternatives in Question #6. In discussing the alternatives, the instructor should make a point of going back to the cause of RMF's current predicament - whether decisions have been made that supported the intended strategy and created value for the customers. A related and central component of this discussion should be whether RMF must have a viable strawboard business model before trying to integrate forward into the production of wall panels. Time can also be spent discussing the option of bankruptcy generally. The case provides students opportunity to consider some of the issues involved with filing for bankruptcy.

Finally, the discussion should conclude with concrete recommendations and action plans for Luke. This discussion should include the non-financial motivations of the owners mentioned earlier, but by waiting until the end to really introduce these, students will be in a better position to evaluate the costs associated with these non-financial motivations. We suggest allotting about 25-30 minutes to discussing these final two questions.

It should be noted that fairly specific discussion questions have been provided. Some instructors may want to use the case with somewhat less specific questions, particularly if working with more advanced students. The following three questions represent a greatly simplified set of preparation questions that might be appropriate for an advanced MBA class:

> Identify and contrast the strategy RMF intended to follow with the strategy that eventually evolved.
> Based on the financial, production, industry and market data in the case, what is RMF's potential as a competitor?
> What would you recommend Luke do? Why? How exactly would he do it?

EPILOGUE

On April 30, 2002 RMF announced it was closing its strawboard business. RMF was continuing to evaluate the proposal to partner with Quickstart Building Systems to build wall panels, either out of strawboard or through the purchase of OSB. Interestingly, after informing its lone remaining customer about the move, the customer expressed willingness to pay RMF a higher price for strawboard if it re-opened.

RESEARCH METHODOLOGY

The case describes a real company and a real situation. The actual names of the company and the individuals affiliated with that company, however, have been disguised at the request of the company. This case was prepared based primarily on field interviews with the general manager of the organization - in the case, Luke. Information for the case was also obtained from interviews with the production manager and the president of the board of directors, as well as from some library research to obtain relevant industry and competitor information.

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PORTFOLIO PENSION PLANNING AND ASSESSMENT PROCESS

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CASE DESCRIPTION

The primary subject matter of this case is to demonstrate an application of modern portfolio theory in construction and measurement of performance of an investment portfolio. The secondary subject matter concerns issues in performance presentation standards. This is an evaluative case, intended to gain familiarity with procedures that should be followed in designing, monitoring, and evaluating an investment portfolio. The task of a portfolio manager is to search for an investment vehicle that would allow clients to reach their objectives, while managing risk. This case illustrates one way of formulating expectations regarding the likely outcome of an investment portfolio. In addition, this case presents simple guidelines for establishing a statement of investment policy for clients. The case has a difficulty level of four, appropriate for senior level.

CASE SYNOPSIS

Portfolio management, while still an art, has greatly benefited from recent developments in financial theory. The fruits of empirical evidence provide a useful tool to both active and passive money managers. For example, small investors may be able to obtain a reasonable return on investment, in a cost efficient manner, by investing in an index fund. Investors with more capital may benefit from active security selection, such as investments in value and growth stocks.

This case provides two simple designs, employing both active and passive strategies, for managing small and medium size retirement portfolios. It also utilizes a number of tools developed in modern portfolio theory to provide an estimation of portfolio return and risk. While the utmost important criterion for measuring performance is reaching desired goals, a risk adjusted measure of performance is also provided.

INSTRUCTORS' NOTES

Learning Objectives

This case provides simple guidelines for constructing and monitoring investment portfolios that are in line with the theory and practice of asset management. The students are introduced to

alternative criteria in portfolio building and performance measurement and are guided through a completed example. The teaching notes provide clarification and documentation regarding the case.

ANSWERS TO DISCUSSION ISSUES

a) Juniper, a member of the investment committee, while in favor of Lloyd's recommendations, suggests that the weight associated with the growth fund for the medium size retirement portfolios should increase to 35 percent (from 25 percent) and bonds to 15 percent (from 25 percent). Provide a critique of her comments by using the chart in Exhibit 13.

Juniper's comments are well taken. Investing a higher percentage in growth stocks of 35 percent seems to be better than 25 percent. On the other hand, one should note that an index fund such as S&P 500 is somewhat dominated by growth stocks. Thereby, the original weights are still satisfactory. Exhibit TN1 shows the results for Juniper's strategy. As shown in Exhibit TN1, there is an increase in both return and risk of this portfolio, producing a Sharpe ratio of 0.74. Thereby, Juniper's approach while generating a slightly higher return than those provided in Exhibit 6, does not produce a better risk adjusted return.

EXHIBIT TN1
Pilot Portfolio, a 25 Percent Weight for Value and Stock Index Funds,
35 Percent for Growth Stocks and 15 Percent for Bonds

Year	StockIndex (R_{si})	Growth Stocks (R_{gs})	Value Stocks (R_{vs})	Gov. Bonds (R_{bi})	Portfolio Return
1981	-1.23	-2.84	3.74	1.42	1.09
1982	5.35	6.99	7.29	4.37	23.99
1983	5.63	5.63	7.50	1.11	19.87
1984	1.57	-1.04	4.13	2.10	6.76
1985	8.04	11.47	8.23	3.05	30.78
1986	4.62	4.28	5.23	2.27	16.40
1987	1.31	1.75	-0.69	0.44	2.80
1988	4.20	4.21	6.35	0.92	15.68
1989	7.87	12.18	7.36	1.99	29.40
1990	-0.79	-0.38	-3.76	1.46	-3.47
1991	7.64	15.37	7.21	2.32	32.54
1992	1.92	2.37	6.06	1.08	11.43

EXHIBIT TN1
Pilot Portfolio, a 25 Percent Weight for Value and Stock Index Funds,
35 Percent for Growth Stocks and 15 Percent for Bonds

Year	StockIndex (R_{si})	Growth Stocks (R_{gs})	Value Stocks (R_{vs})	Gov. Bonds (R_{bi})	Portfolio Return
1993	2.50	1.18	5.31	1.69	10.67
1994	0.33	0.48	-1.17	-0.77	-1.13
1995	9.36	12.98	8.96	2.52	33.82
1996	5.77	7.05	3.72	0.32	16.85
1997	8.34	10.61	8.23	1.26	28.43
1998	7.15	11.59	3.02	1.53	23.28
1999	5.26	10.43	1.35	-0.27	16.78
2000	-2.28	-4.69	-0.04	1.89	-5.12
Mean	15.541				
Standard Deviation	12.088				

Source: Exhibit 5. Each column in Exhibit 5 is multiplied by 0.25, 0.35, 0.25, and 0.15 respectively, and recorded in Exhibit TN1. The cumulative values of the first four columns per year would then generate portfolio return column in Exhibit TN1.

The reward to variability ratio of Sharpe is; $\frac{\bar{R}_p - \bar{R}_f}{S_p}$, (15.541-6.66)/12.088=0.74.

An average risk-free return of 6.66 percent, prevailing during 1981-2000, is used.

$$R_p = .25*R_{si} + .35*R_{gs} + .25*R_{vs} + .15*R_{bi}$$

$$S^2_p = (.25)^2 * S^2_{si} + (.35)^2 * S^2_{gs} + (.25)_2 * S^2_{vs} + (.15)^2 * S^2_{bi} + 2*.25*.35*S_{si}*S_{gs}*Corr(SI,GS)$$
$$+ 2*.25*.25*S_{si}*S_{vs}*Corr(SI,VS) + 2*.25*.15*S_{si}*S_{bi}*Corr(SI,BI)$$
$$+ 2*.35*.25*S_{gs}*S_{vs}*Corr(GS,VS)$$
$$+ 2*.35*.15*S_{gs}*S_{bi}*Corr(GS,BI) + 2*.25*.15*S_{vs}*S_{bi}*Corr(VS,BI)$$

Where:

R_p and S_p denote return and risk on the portfolio, respectively
R_{si} and S_{si} denote return and risk on stock index fund, respectively
R_{gs} and S_{gs} denote return and risk on growth stocks, respectively
R_{vs} and S_{vs} denote return and risk on value stocks, respectively.
R_{bi} and S_{bi} denote return and risk on bond index fund, respectively

b) Lloyd's father asks whether exchange traded funds should be employed instead of index mutual funds (See Exhibit 14). Provide comments on the merits of this suggestion.

Lloyd's father is considering a hot topic regarding the use of exchange traded funds.These funds are available in the market with various names. As a unit investment trust, Spiders have been trading since 1993. These are depository receipts based on S&P 500, designed by member firms of the American Stock Exchange, and are priced at 1/10th of S&P 500. If S&P =1400, then a share of Spiders (SPY) = $140. DIAMONDs (DIA) are based on the Dow Jones 30 industrial companies' index. And have been traded since early 1998. If DJIA=11000, then DIA = $110.

Exchange traded funds trade like stock and can be sold at any time during the trading hours. In contrast, mutual funds can only be bought or sold at the 4:00 p.m. closing prices. Some advantages of exchange traded funds are that you can buy them on margin (borrowing up to 50 percent), place limit orders, and sell them short at any time since they are not subject to the up-tick rule. A short sale of a security takes place when a particular exchange traded fund is expected to decline in price. One can thereby borrow the exchange traded fund and sell it. When or if the price declines, you would buy it at a lower price and complete the short sale process. Put and call options are available on some of these funds such as Spiders. Compared to regular mutual funds, exchange traded funds are considered tax efficient since they do not produce and distribute as much realized gains or losses on a year by year basis.

Lloyd feels that these long-term retirement plans cannot gain much from exchange traded funds. This is because of the long-term, passive nature of their holdings and their tax-free status. Exchange traded funds may entail higher transaction costs than Vanguard Index 500.

c) Iris, a member of the investment committee would like Lloyd to replace the Vanguard Index 500 with the Vanguard Extended Market Index. Among her reasons are that more attention should be paid to the entire market portfolio including small capitalization stocks. Provide a response to this comment. See Exhibit 15 to help develop your answer.

Following Iris's view, information regarding the use of a broader index fund can be found in Exhibits TN2 through TN4. As shown in Exhibits TN2 through TN4, performance of S&P 500 index differs from the extended market since S&P 500 index represents more of a larger capitalization companies. However, the growth fund that is included in Lloyd's pilot study would also represent smaller capitalization companies. Thereby, there appear to be no need to increase the weight for small capitalization stocks in the pilot portfolios.

EXHIBIT TN2
Performance Results for Vanguard Extended Market Index
(Data Through 09-30-2001)
Style: a Combination of Small, Medium and Some Large Size Stocks

	1994	1995	1996	1997	1998	1999	2000	Sep-01
Total Return (%)	-1.8	33.8	17.6	26.7	8.4	36.2	-15.5	-24.0
+/- S+P500 (%)	-3.1	-3.7	-5.3	-6.7	-20.2	15.2	-6.4	-3.1

EXHIBIT TN3
PERFORMANCE RESULTS FOR VANGUARD EXTENDED MARKET INDEX
(Data through 09-30-2001)

	Past One Year	Past 3 Years	Past 5 Years	Past 10 Years
Total Return (%)	-27.45	6.08	5.56	10.07
+/- S+P500 (%)	-7.79	3.48	-5.20	-2.63

EXHIBIT TN4
Performance Results for Vanguard Extended Market Index
Statistical Results: past 3 Years Through 09-30-2001

Statistics	Mean (%)	Std.Dev. (%)	Sharpe Ratio	Beta (%)	Alpha (%)
Value	2.23	29.8	-0.11	1.14	2.80
Statistics	Sales Charges (%)		Management Fees (%)		12b-1 Fees (%)
Value	None		0.22		None

In Exhibits TN2 through TN4 Sharpe Ratio provides a measure of risk-adjusted return. Higher values for the Sharpe ratio represent better performance. Beta denotes a measure of risk relative to the market. A beta value of one represents portfolio risk similar to the market. Higher values for beta are an indication of greater volatility in portfolio return. Alpha is a measure of performance in the context of the capital asset pricing model. It represents excess return above the required return. Sale charges are a one- time fee. Management fees are annual fees charged by those that design and monitor the investment portfolios. 12b-1 fees are annual charges imposed by the fund administration for mailing, advertising and compensation to the independent selling groups.

d) Todd, an active money manager, dislikes the idea of indexing, since he feels that during good market conditions it is tantamount to "buy high, sell low." Comment on the validity of his argument.

Todd's comments are quite to the point in that an index fund such as S&P500 is dominated by about 50 large companies. As the market rises, the weights of these stocks would rise in the index. The index mutual fund would thereby have to buy more of the same high flyers at a higher price. The reverse would take place in a market decline. That is, you would have to sell those shares at continuously lower prices. This is in contrast to buying at lower prices and selling at higher prices. However, Lloyd has also included value stocks that are typically bought at a lower price and sold at a higher price.

e) Alan, a senior portfolio manager and a long-time member of the firm, states that clients have been attracted to the firm because of their special talents in stock selection. Thereby, such clients may dislike Lloyd's new approach. Provide a response to these issues.

Alan's comments are well taken. Diversification among styles is necessary. An active approach to stock selection should be included as well as indexing. Note that the Dreman High Return Fund is selected for its active value style and concentration on small and mid capitalization stocks. However, empirical evidence shows that about 75 percent of money managers appear to perform somewhat less than market indexes. Therefore, indexing should be a part of the portfolio. At any rate, the firm should inform the respective clients about the change in portfolio manager, his philosophy, and style of investing.

ST. LOUIS CHEMICAL: THE ACQUISITION

David A. Kunz, Southeast Missouri State University

CASE DESCRIPTION

The primary subject matter of this case concerns the business valuation process. Secondary issues examined include the challenges of valuing small, privately held businesses, the services provided by business brokers and issues regarding structuring a business sale. The case requires students to have an introductory knowledge of accounting, finance and general business issues thus the case has a difficulty level of three (junior level) or higher. The case is designed to be taught in one class session of approximately 1.25 hours and is expected to require 2-3 hours of preparation time from the students.

CASE SYNOPSIS

St. Louis Chemical is a regional chemical distributor, headquartered in St. Louis. Don Williams, the President and primary owner, began St. Louis Chemical ten years ago after a successful career in chemical sales and marketing. The company reported small losses during it first two years of operation but has since reported eight consecutive years of increasing sales and profits. The growth has required the acquisition of additional land, equipment, expansion of storage capacity and more than tripling the size of the work force. St. Louis Chemical has become the leading distributor in the St. Louis area.

Williams plans to open a new facility in Memphis, Tennessee to expand its geographic market. The company was in the process of acquiring the necessary land and equipment when Williams received a telephone call from Frank James, St. Louis Chemical's sales manager. James indicated that First Chemical, a Memphis based chemical distributor was on the market. James wanted to know if Williams was interested in investigating the possibility of acquiring First Chemical. Williams was interested but was uncertain of how to determine a fair value for First Chemical.

INSTRUCTORS' NOTES

DISCUSSION QUESTIONS

Assume the role of Ann Bush and prepare answers to the following:

1) Discuss each valuation method. Describe the strengths and weaknesses of each?

- **a) Asset based methods.**
  - **i) Accounting book value.**
  - **ii) Adjusted tangible book value,**
  - **iii) Liquidation value.**
- **b) Market comparison.**
  - **i) Price/Earnings ratio (P/E multiple).**
  - **ii) Multiple of book value.**
  - **iii) Multiple of revenue.**
- **c) Free cash flow (also called the discounted cash flow method).**

a) *Asset Based Methods*: In general, asset based methods assume that a business is equal to the market value of its assets. The firm's equity is equal to the company's value less its debt. The three methods listed in the case approach asset valuation differently but the basic valuation process is the same.

i) *Accounting Book Value:* This value can be obtained from a review of the firm's balance sheet. It has the advantage of being easy to obtain but since accounting values are historical values this approach has little value. Current assets (cash, accounts receivables, and inventory) may reflect market value but fixed assets which are recorded at cost and depreciated over time are most likely to be an inaccurate estimate of fair market value. This method is rarely the basis of a sales transaction.

ii) *Adjusted Tangible Book Value:* This value recognizes the weaknesses of accounting balance sheet numbers and inserts market values for historical values. Market values for large dollar fixed assets (land, buildings, vehicles and other equipment) are obtained from appraisals. Current assets are also reviewed. Receivables are adjusted by removing accounts that are more than 60 or 90 days past due (the age of acceptable receivables would vary from company to company). Inventory items are reviewed to determine proper value and some items may be considered to have no value and are discarded. After adjustments are made this method is relatively easy to calculate but still views the value of a business as the sum of its assets.

iii) *Liquidation Value:* This method is similar to Adjusted Tangible Book Value, since it replaces accounting values with values that could be realized if the assets were rapidly sold or liquidated. Since a premium is place on a rapid sale, the asset values tend to be discounted. This method is frequently used by banks to determine "loan value" of assets or collateral value of assets. This method will almost always yield the lowest company value and rarely used in an acquisition.

(b) *Market Comparisons*: In general, market comparison methods assume that a business can be valued by examining similar transactions and using selected relationships. The three methods listed in the case require an appropriate "comparable" before the methods can be applied. A comparable transaction is the ratio between earnings and stock price for similar publicly traded companies (same industry and size) or the actual sale of similar companies whose market values are known. True comparables are hard to find and usually require the services of an investment banking firm or a business broker.

i) *Price/Earnings Ratio (P/E Ratio):* This approach is based on the assumptions that value of a privately held company can be determined as a multiple of reported earnings. An advantage of this method is that it values the firm based on earnings versus the sum of its asset values. A business is a "going concern" and assets are acquired to generate revenues and earnings thus this valuation approach emphasizes the earnings of the firm. This approach assumes historic earnings are indicative of future earnings. Unusual and nonrecurring items should be eliminated from reported earnings. This method is widely used, easily understood and calculated. The big disadvantage of this method is it requires a "comparable" earnings multiple. The value of a share of stock is determined by multiplying the firm's earnings per share by the "comparable" multiple. Total equity value is calculated by multiplying the number of shares outstanding and stock price. This approach values the firm's equity and requires the current value of outstanding debt to be added to the value of equity to arrive at the firm's value.

ii) *Multiple of Book Value:* Another method based on comparable transaction is a multiple of a firm's book value or book value per share. The advantages and disadvantages of this method are similar to those associated with the Price/Earnings ratio. This method is widely used, easily understood and easy to calculated. The major disadvantage is finding a "comparable" book value multiple. The value of a share of stock is determined by multiplying the firm's book value per share by the "comparable" multiple. Total equity value is calculated by multiplying the number of shares outstanding and stock

price. This approach values the firm's equity and requires the current value of outstanding debt to be added to the value of equity to arrive at the firm's value.

iii) *Multiple of Revenue:* A similar method for small businesses is a sales price based on a percentage of revenue. This method has the same advantages and disadvantages of the P/E ratio and multiple of book value. The value of a firm is a percentage of its reported revenue. Firm value is determined by multiplying the revenue by the "comparable" percent. The firm's outstanding debt is subtracted from the company value to determine the value of equity. Per share value is calculated by dividing total equity by the number of shares outstanding.

c) *Free Cash Flow (also called Discounted Cash Flow)*

This method follows the traditional finance valuation approach by establishing a firm's value based on the present value of future cash flows. The advantage of this approach is that it is based on future cash flows rather than a "comparable ratio" or asset values. The disadvantage of this method is that it requires future cash flows to be forecasted and the development of an appropriate discount rate. The value of a firm is the present value of future cash flows plus the value of non-operating assets. The firm's outstanding debt is subtracted from the company value to determine the value of equity. Per share value is calculated by dividing total equity by the number of shares outstanding.

2) Develop values for First Chemical stock using methods discussed in Question 1.

a) *Asset Based Methods*

i) *Accounting Book Value:*

Balance sheet book value of equity for the year ending 2002 is	$8,740,000.
Shareholder Equity as of 12-31-2002	$8,740,000
Number of Shares Outstanding	1,000,000
Accounting Book Value per Share	$8.74

ii) *Adjusted Tangible Book Value:*

Substituting market value for book value of fixed assets ($(8,750,000 market value versus $6,437,000 book value) increases shareholder equity by $2,313,000 to $11,053,000. Market value is obtained from recent appraisals.

Adjusted Shareholder Equity as of 12-31-2002	$11,053,000
Number of Shares Outstanding	1,000,000
Adjusted Tangible Book Value per Share	$11.05

See Table One for calculation.

iii) Liquidation Value:

Using the "rule of thumb" liquidation assumptions provided in the case (70% of accounts receivables could be collected, inventory could be sold for 60% of book value and fixed assets would yield 50% of book value) decreases fixed asset values to $9,735,000 and shareholder equity to $2,137,000.

Adjusted Shareholder Equity as of 12-31-2002	$2,137,000
Number of Shares Outstanding	1,000,000
Liquidation Value per Share	$2.14

See Table Two for calculation.

b) *Market Comparisons*

i) *Price Earnings Multiple or P/E Ratio:*

Hoover stated research on previous sale transactions indicated companies were selling between 16 and 18 times earnings. Williams suggested using a multiple of 16 in the calculation.

Earnings	$
1999	678,000
2000	760,000
2001	725,000
2002	795,000
Average Earnings 1999-2002	739,500
Average Number of Shares Outstanding	1,000,000
Average Earnings per Share	.74
Comparable P/E Ratio	16x
Value per Share (P/E)	$11.84

See Table Three for calculations.

- *Book Value Multiple:*

Hoover stated that two other chemical distributors had sold in the past year at multiples of 1.4 and 1.7 times book value. Hoover suggested using a multiple of 1.5 to be conservative.

Shareholder Equity as of 12-31-2002	$8,740,000
Number of Shares Outstanding	1,000,000
Book Value per Share	$8.74
Multiple of Book Value	1.50
Value per Share (Book Value Multiple)	$13.11

iii) *Revenue Multiple:*

Hoover suggested using 50% of sales to estimate a market value.

2002 Revenue	$39,841
Revenue Percent	0.50
Firm Value	19,921
Less: Value of debt	7,598
Value of equity	12,323
Number of shares outstanding	1,000,000
Value per Share (Revenue Multiple)	$12.32

c) *Free Cash Flow (also called Discounted Cash Flow):*

The case provides assumption to develop the necessary cash flows. To aid the student a partially completed table (Case Table Three) is provided.

Assumptions include:

i) Williams and Bush thought forecasting for five years would be appropriate.
ii) Revenues were forecast to grow at 4.0% per year.
iii) Williams suggested they project revenues to grow at 4.0% per year and forecast cost of goods sold and selling and administrative expense at 84% and 8% of sales respectively. This was slightly lower than the actual percentage for 2001 and 2000 but Williams thought planned plant

investments should improve operating efficiency. St. Louis Chemical purchasing power should reduce cost of goods sold.

iv) Capital expenditures for the first two years would be approximately $2,000,000 ($1,000,000 each year) and $800,000 per year thereafter.

v) Annual depreciation expense was $753,000 last year, but updating of equipment is planned. Bush suggested using $800,000 for annual depreciation expense in year one (2003) and reduce the amount by $25,000 each successive year.

vi) An income tax rate of 30% was projected.

vii) Current assets and current liabilities were projected at 24% and 14% of sales respectively.

viii) Bush suggested using the constant growth model to estimate residual or horizon value. Williams considered First Chemical and St. Louis Chemical to have the same risk level so he told Bush use St. Louis Chemical's current cost of capital (k) of 11% as the discount rate or the required rate of return. Williams suggested assuming a 6% growth rate (g) for Net Operating Profit after Taxes (NOPAT).

Horizon Value = 2007 Free Cash Flow (1-.06)/(.11-.06)
= $1,238,000(.04)/.05
= $24,781,000

Calculations are provided in Table Four.

	$	PV@ 11%
2003 Free Cash Flow	1,920,000	1,730,000
2004 Free Cash Flow	750,000	572,000
2005 Free Cash Flow	1,012,000	740,000
2006 Free Cash Flow	1,123,000	740,000
2007 Free Cash Flow	1.238,000	735,000
Present Value Free cash flow @ 11%		4,517,000
Horizon value	24,781,000	14,706,000
Present Value of future cash flows @ 11%		19,223,000
Value of debt	7,598,000	
Value of equity	11,625,000	
Number of Shares Outstanding		1,000,000
Value per Share (Free Cash Flow)		$11.63

3) Recommend a fair-market value for First Chemical's common stock. Support your value.

There is not a single correct value. The valuation methods yield a range of values from a low of $2.14 per share using the liquidation method to a high of $13.11 using a Multiple of Book Value. The Market Comparison Methods ranged from a high of $13.11 (Book Value Multiple) to a low of $11.84 using the Price Earnings Ratio and averaged $12.42. These methods along with the Free Cash Flow value of $11.63 most likely reflect a realistic market value. Market comparison methods reflect comparable market transactions while the Free Cash Flow Method reflects the traditional finance valuation process by establishing a firm's value based on the present value of future cash flows.

Given the calculated values a fair market value for First Chemical is between $12.00 and $13.00 per share. Students need to support the value established.

Valuation Method	$ Per Share Value	$ Equity Value
Asset Based		
Accounting Book Value	8.74	8,740,000
Adjusted Tangible Book Value	11.05	11,050,000
Liquidation Value	2.14	2,140,000
Market Comparison		
Price Earnings Ratio (P/E Ratio)	11.84	11,840,000
Book Value Multiple	13.11	13,110,000
Revenue Multiple	12.32	12,320,000
Free Cash Flow or Discounted Cash Flow	11.63	11,630,000

4) Assume St. Louis Chemical has an interest in acquiring First Chemical.

a) Discuss additional First Chemical information that should be requested to improve the acquisition analysis? Explain your answer.

Additional useful information would include:

i) Complete financial information (Balance Sheets, Income Statements and Cash Flow Statements) for previous five years. Trends can be evaluated with five years of reports and Cash Flow Statements will allow cash inflows and outflows can be analyzed.

ii) List of First Chemical shareholders. If an offer is made will there be dissenting shareholders who oppose the sale and have an ownership position sufficient to block or hinder the sale?
iii) A detailed customer list with material purchased by each for the last three years. This will give St. Louis Chemical a better understanding of the number of customers and product sales.
iv) Detail of accounts receivables (amount and age of current receivables).
v) Detail of inventory (amount, value, usage and age)
vi) List of purchase contracts. List of all long-term agreements.
vii) Tax returns for the previous five years to compare with financial statements. Tax returns are likely to be more accurate than financial statements.
viii) A letter from First Chemical's attorney summarizing current and potential litigation to insure all the potential liabilities are reflected in the firm's financial statements.
ix) Detail of insurance coverage and cost.
x) List of key operating, sales and marketing personnel. This information will allow personnel resources to be evaluated.
xi) Detail of current and potential environmental problems.

The above information would aid the acquisition process by increasing the reliability of the various valuation methods. First Chemical will be reluctant to share some of this information until a serious interest has been expressed by St. Louis Chemical and a no compete agreement has been signed by St. Louis Chemical.

b) Recommend a negotiating strategy.

i) Request a meeting with the Chairman and CEO of First Chemical to discuss the offer.
ii) Indicate to First Chemical that based on preliminary valuations the $16,000,000 asking price seems high. Share the valuations and ask First Chemical to justify the asking price.
iii) Request the additional information discussed in 4a. This additional information may increase the accuracy of the valuation.
iv) After analysis, submit a counter offer with supporting documentation for the offer.

The negotiation is likely to require numerous meeting between the two parties and their attorneys, accountants and other advisors.

5) Assume St. Louis Chemical decides to purchase First Chemical. Recommend how the sale should be structured.

a) *Payment alternatives*. The case does not provide information that indicates a preferred payment structure for either party but in general the seller wants as much cash at closing as possible. The inverse is true for the buyer.

i) *Cash at closing*. This would most likely be the preference of First Chemical but a full cash payment would not be the preference of St. Louis Chemical.

ii) An initial cash payment plus future payments or as stock. This alternative would probably not be attractive to either party. Williams, the current majority shareholder of St. Louis Chemical, will not want to reduce his ownership position and the shareholders of First Chemical have indicated an interest in exiting the chemical distribution business.

iii) Some combination of the aforementioned. The most likely payment alternative will be an initial cash payment followed by a series of future cash payments.

iv) How will sales terms affect price? Explain your answer. In general there is a continuum where all cash and "lower" sales price is at one end and zero cash and "higher" sales price is at the other end. Sellers want cash and buyers usually want to pay with a note, payable at some time in the future. Normal negotiating works each group to a point on the continuum where each assumes they have optimized their position. At that point, each side is satisfied. The sale is consummated.

b) Should stock or assets be acquired? How will the purchase of stock or assets affect price? Explain your answer.

Again the case does not provide information that indicates a preferred purchase structure for either party. Either method of transfer of ownership is acceptable. But as with the payment structure, sellers are more likely to prefer a stock sale while buyers prefer an asset sale. Each party to the transaction needs to address this issue in terms of tax liabilities, concern about unexpected events within the firm, and related uncertainties.

Table One
Adjusted tangible Book Value
Balance Sheets (000s/$)
For the year ending December 31

	Book Value	Market Value	
	2002	2002	
Current assets			
Cash	189	189	
Receivables	4,452	4,452	
Inventories	5,123	5,123	
Prepaid expenses	137	137	
Total current assets	9,901	9,901	
Property and equipment at cost			
Land	1,689		
Plant, property and equipment	9,455		
Less accumulated depreciation	(4,707)		
Net Fixed assets	6,437	8,750	Appraisal Value
Total assets	16,338	18,651	
Current liabilities			
Accounts payable	4,424	4,424	
Accrued expenses	174	174	
Total current liabilities	4,598	4,598	
Long-term obligations*	3,000	3,000	
Total liabilities	7,598	7,598	
Shareholders' equity			
Common stock $1 par value*	1,000		
Paid in capital	2,253		
Retained earnings	5,487		
Total shareholders' equity	8,740	11,053	Adj. Book Value
Total liabilities and equity	16,338	18,651	
Number of Shares Outstanding	1,000,000	1,000,000	
Adj. Tangible Value per Share		**$11.05**	

Table Two: Liquidation Value Balance Sheets (000s/$) For the year ending December 31			
	Book Value	Liquidation Value	% Book Value
	2002	2002	
Current assets			
Cash	189	189	
Receivables	4,452	3,116	70
Inventories	5,123	3,074	60
Prepaid expenses	137	137	
Total current assets	9,901	6,516	
Property and equipment at cost			
Land	1,689		
Plant, property and equipment	9,455		
Less accumulated depreciation	(4,707)		
Total PP&E	6,437	3,219	50
Total assets	16,338	9,735	
Current liabilities			
Accounts payable	4,424	4,424	
Accrued expenses	174	174	
Total current liabilities	4,598	4,598	
Long-term obligations	3,000	3,000	
Total liabilities	7,598	7,598	
Shareholders' equity			
Common stock $1 par value	1,000		
Paid in capital	2,253		
Retained earnings	5,487		
Total shareholders' equity	8,740	2,137	
Total liabilities and equity	16,338	9,735	
Number of Shares Outstanding	1,000,000	1,000,000	
Liquidation Value per Share		**$2.14**	

Table Three: Price/Earnings Multiple (P/E Ratio)
Statement of Income (000s/$)
For the Years Ending December 31

	1999 $	2000 $	2001 $	2002 $
Net Sales	36,786	38,912	40,936	39,841
Costs and expenses				
Cost of sales	31,721	33,441	35,225	34,227
Selling G & A	2,980	3,199	3,426	3,323
Depreciation Expense	743	802	815	753
Total costs and expenses	35,444	37,442	39,466	38,303
Operating income	1,343	1,471	1,470	1,538
Interest expense	375	385	434	402
Income before income taxes	968	1,086	1,036	1,136
Income tax expenses	290	326	311	341
Net Income	678	760	725	795
Earnings per share	0.68	0.76	0.73	0.80
Dividends per share	0.10	0.11	0.12	0.13
Average EPS (99-02)	$0.74			
P/E Multiple	16			
Share Value (P/E)	**$11.84**			

Table Four: Free Cash Flow						
	2002	2003	2004	2005	2006	2007
	Actual	Projected	Projected	Projected	Projected	Projected
	(000's/$)	(000's/$)	(000's/$)	(000's/$)	(000's/$)	(000's/$)
Sales	39,841	41,435	43,092	44,816	46,609	48,473
Cost of Goods Sold	34,227	34,805	36,197	37,645	39,152	40,717
Selling G & A	3,323	3,315	3,447	3,585	3,729	3,878
Operating Expenses ex depreciation	37,550	38,120	39,644	41,230	42,881	44,595
Depreciation Expense	753	800	775	750	725	700
Operating Income	1,538	2,515	2,673	2,836	3,003	3,178
Income Tax Expense (30%)	461	755	802	851	901	953
NOPAT	1,077	1,760	1,871	1,985	2,102	2,225
Growth rate of NOPAT		0.63	0.06	0.06	0.06	0.06
Current Assets	9,901	9,944	10,342	10,756	11,186	11,634
Current Liabilities	4,598	5,801	6,033	6,274	6,525	6,786
Required Net Working Capital	5,303	4,143	4,309	4,482	4,661	4,848
Capita Expenditures		1,000	1,000	800	800	800
Required Net Plant & Equipment	6,437	7,437	8,437	9,237	10,037	10,837
Required Net Operating Capital	11,740	11,580	12,746	13,719	14,698	15,685
Required New Operating Capital		(160)	1,166	973	979	987
Free CF (NOPAT- Req New Oper Capital)		1,920	705	1,012	1,123	1,238
Horizon Value						24,781
PV of free cash flow @ 11%	4,517	1,730	572	740	740	735
PV of horizon value @ 11%	14,706					
PV of future cash flows @ 11%	19,223					
Value of debt	7,598					
Value of equity	11,625					
Number Shares Outstanding	1,000,000					
Value per Share	**$11.63**					

KIRKLAND'S, INC.

Wilburn Lane, Lambuth University
Mike McCullough, University of Tennessee at Martin

CASE DESCRIPTION

In this case the authors tell the story of the founding and impressive growth of Kirkland's Incorporated. The story is one of niche marketing perfected through a deep understanding of product acquisition and merchandise display by a management team that has stayed together for decades. The case is suitable for an upper division undergraduate marketing strategy or business strategy course, perhaps even as a capstone project. The case is designed to be taught in one fifty to seventy-five minute class period, with about thirty to forty-five minutes of reading and preparation time on the students' part, prior to class.

CASE SYNOPSIS

This case is about Kirkland's Inc., a specialty retailer that began with one store in the late 1960s, and today has close to 300 stores with annual sales of over $350 million. Also, it is adding about 30-40 new stores per year. Kirkland's began as a gift shop but has evolved into a home décor/accessories retailer. It has adjusted its product mix to meet the changing demands of consumers and because of some moves made by its competitors. The case includes a very detailed analysis of the home décor/accessories industry, a history of Kirkland's, the current status of Kirkland's (including its strategy and corporate culture), and a detailed description of its major competitors. Some detailed financial information is provided in the case, and current websites are referenced for additional financial information.

INSTRUCTORS' NOTE

The Kirkland's Inc. case would be useful in several different types of courses. First, this would be a very good case to use in a Strategic Management class. The industry analysis gives the reader enough information to clearly understand the home décor/accessories industry. Each of the major competitors is discussed in detail and financial data on Kirkland's and its competitors is presented both in the case and through referenced websites. The information about the company illustrates several topics covered in a Strategic Management class. First, it is a good case to show a firm moving from the entrepreneurial stage to the administrative stage. When you have a few stores, you can take more risk. As you get large and go public, you cannot take as many risks.

Second, the case shows how firms can be successful in different positions in the industry. Kirkland's is one of the smallest players in the industry, but they are not only surviving-they are thriving. They have used flanking and guerrilla strategies to be successful against their larger competition. Kirkland's strategy has allowed them to leverage themselves with their suppliers and with their landlords. Third, the way in which they tweak their strategy illustrates how important it is to be on a path of continuous improvement.

The second type of course in which you might use this class is a strategic marketing class. Kirkland's has very loyal customers. They keep their merchandise fresh, and they adjust their product categories in response to what their competitors do. Kirkland's is definitely a follower, but it is they way they adjust the individual items in the product categories that makes them so successful. It is unusual to specialty retailers survive nearly forty years--Kirkland's has done so through adaptation. They clearly embody the positioning strategy concept proposed by Trout and Ries. The strategies they have employed are excellent examples of some of the strategies discussed in Trout and Ries book on Marketing Warfare.

Third, this case could be used in a retailing class to show students how companies differentiate themselves by location, product assortment, presentation of merchandise, and price. Kirkland's and their competitors show how differentiation based on one or more of these areas can make even a small retailer successful.

POSSIBLE CLASS DISCUSSION QUESTIONS

1. Why has Kirkland's been able to survive and thrive so long?

The have done several things that have allowed them to survive. First, they have adapted. They changed from being a gift shop to being a home décor/accessories shop. Second, they kept their product fresh-creates customer loyalty. Third, they have been a tough negotiator when it comes to price. Fourth, the way they have managed their real estate allows them to move out of a location with much more ease than most of their competitors. Fifth, they have been consistent-this is probably because of the tenure of key employees. Sixth, they do not try to go head on against bigger companies in the industry. They take what the other companies give them and do a job with it.

2. Why does Kirkland's have higher sales per square foot than most of their competitors, especially since they have lower price points than their competitors?

There are probably two reasons for this. First, they keep the merchandise fresh. If it does not sell they discounted it and get it out the door. They are always looking for new trends,

and they are constantly changing the merchandise. Second, mall stores tend to have higher sales per square foot than out-of-mall stores.

3. What impact would the loss of key executives have on the company?

This would be devastating to the company. Carl Kirkland has led this company through a variety of situations. He knows the business and he know what customers want. The CEO Robert Alderson has tons of experience in finding and developing new products. Reynolds Faulkner is the only one in the company who is capable of being a CFO. Chris LaFont is the man behind the merchandising. He is very hands-on in selecting the merchandise, and he has been doing if for nearly 20 years.

4. As companies like Cost Plus-World Markets further expand east and Kirkland has more expansion to the west, how do you think this will impact the companies?

Kirkland's does not compete with Cost Plus-World Markets as much as Pier 1 competes with Cost Plus-World Markets. Kirkland's has shown that it can compete with Bombay, Pier1 and Bed, Bath, and Beyond. They do so by trying to have different merchandise.

5. Do you think Kirkland's should go international?

Eventually they may, but by their own estimations they should be able triple the number of stores they have in the U.S. Geographic expansion within the U. S. makes more since for now.

6. Many of the competitors have segmented the market (especially the kids market), should Kirkland's have a Kids' Kirkland?

At this time, with all the geographic expansion they have going own, they should probably not try to segment the market in that way. If there is merchandise that fits their concept and designed for Kids-maybe they could have a "Kids Korner."

7. Do you think Kirkland's is doing enough in e-commerce?

No. I realize that a lot of their business is people browsing through malls, but if they plan to compete in the future they need a stronger web presents and they need to begin a serious data mining program on their customers. That is some thing that could significantly increase

sales without having to open new store locations. They could sell direct. Williams-Sonoma does this very well.

8. Since they are looking at non-mall stores, do you think they should do more advertising?

Yes! Currently their advertising budget is ½% of sales. As they move out of malls, the destination stores are not going to be there to generate traffic for them. They must let people know where they are located, business hours, merchandise assortment, and price. If they do not do this, they may know have very good sales in non-mall locations.

9. The perceptual map at the end of the case was provided by Kirkland's. How accurate do you think the map is at this time?

The perceptual map probably over rates the quality of Kirkland's products. They do keep the merchandise fresh, and they do have lower costs.

10. Do you see any external threats for Kirkland's?

Yes! Kirkland's is very dependent on product from China and India. If anything happened that would impact the relations between the U. S. and these countries, it could impact their supply of merchandise.

11. Discuss the competition relevant to Kirkland's.

Bombay-same locations, but pricier.
Bed, Bath, and Beyond-huge store, but sells a lot of things Kirkland's does not sell.
Linens N' Things-similar to Bed, Bath and Beyond, but not as successful.
Pier 1-Strong competitor on some items. Larger and a little more upscale than Kirkland's.
Cost Plus, Inc.-not geographically as competitive as Pier 1, but would compete on the same items that Pier 1 might.
Williams-Sonoma-Big player in many venues. Has the second largest annual sales. Pricey, but segments market well. Has great catalog and web business.

12. How do you think becoming a public company has changed Kirkland's?

They have had to be organized and meet profit goals quarterly.
They have to be risk averters.

13. How well do you think Kirkland's is or can do related to the driving forces in the industry?

Value focused-Kirkland's matches up well here because they have the lowest prices and are tough price negotiators.
Changing shopping patterns-As more people shop outside the mall, Kirkland's will continue to open more non-mall locations.
Information Systems-Kirkland's recent investment in this area should continue to bring them cost savings.
Centralized Distribution-Kirkland's freight and transportation costs should continue to go lower as more and more products are handled through the distribution center.
On-line Shopping-Kirkland's is probably a laggard in this area. They really should devote some resources to this area and establish a good customer data-mining program. They have loyal customers, and they need to continually be in tough with those customers.
Globalization-Kirkland's does not see the need for this right now because they think they need to expand in the U. S. That is true, but they need to be careful to totally disregard some of the very fertile international markets.
Segmenting by age-Given the size of Kirkland's stores, it will be difficult for them to segment the market by age.

14. Kirkland's plans to finance their store expansion out of operating capital. Do you think they can do this?

Yes. They have no debt so they can take the money that they would have to spend on interest and invest it in opening other stores. Also, it only costs them about $300,000 on the front end to open a store. Currently, their payback is two years.

15. About 40% of sales and 80% of profit comes in the fourth quarter. What could Kirkland's do to level out sales and profits?

They may need to do more promotions at certain times of the year (such as Mother's Day) and for special occasions (such as birthdays and anniversaries). They might also consider having a bridal registry.

16. Ask the student to compare the financial positions of the firms in this industry to Kirkland's.

Bombay has more stores and sales, but has considerably less net profit margin.

Bed, Bath, and Beyond is the major player when it comes to sales and profit. They also have the largest profit margin. They have a lot going for them.
Cost Plus, Inc. is a relatively small player, but they are growing fast and expanding east into Kirkland's major markets. Their net profit is less than Kirkland's. Their sales per square foot are less, and their turnover rate is less.
Linens N' Things is a major player in sales volume, but their net profit margin is less than half that of Bed, Bath and Beyond. Their turnover rate is low, and they have the lowest sales per square foot in the industry.
Pier 1 is huge simply because they have so many stores. They are more upscale than Kirkland's, but they do not have as good a turnover rate. Also, while their sales per square foot are good, it is not as high as Kirkland's.
Williams-Sonoma is a major player because they have so many different types of stores and are in so many different types of retail venues. Their sales were second only to Bed, Bath, and Beyond. Their sales per square foot were the highest in the industry, and they have a high turnover rate.
Kirkland's is very small compared to most of its competitors. It has the lowest total sales, and the second lowest net income. However, it has a very high turnover rate and it has the second highest sales per square foot. Also, it has the lowest prices.

17. Kirkland's has been in business for 36 years. Do you think they will be in business for another 36 years?

This could be argued either way. Not many small specialty shops have been in business for 72 years. On the other hand, Kirkland's has been good at adapting. They have changed their focus and they have changed their product mix. The answer to this question lies in how well they understand the customer's needs and adapt to them.

NEW CREDIT PROGRAM AT THE DISCOUNT WINDOW

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Darrell Parker, Georgia Southern University
Bill Z. Yang, Georgia Southern University

CASE DESCRIPTION

The primary subject matter of this case concerns the effect of the new credit program at the discount window on the behavior of the federal funds rate. The objective is to teach students how the basic demand-and-supply framework is employed to analyze the conduct of monetary policy in the reserve market. This case would be appropriate for a money and banking class, a monetary economics class, a financial economics class, an intermediate or an advance macroeconomic theory class. Level of difficulty could be at three or four. The case is designed to be discussed in one and one-half hours and should take students less than three hours of outside preparation.

CASE SYNOPSIS

The Federal Reserve employs three monetary policy tools: the required reserves, the open market operation (which affects the federal funds rate) and the discount policy. Traditionally (i.e., before January 9, 2003), the Fed set the discount rate below the targeted market federal funds rate, but prohibited banks from using the discount window. As a result, the volume of outstanding discount loans was normally small even though the discount rate is cheaper than the federal funds rate.

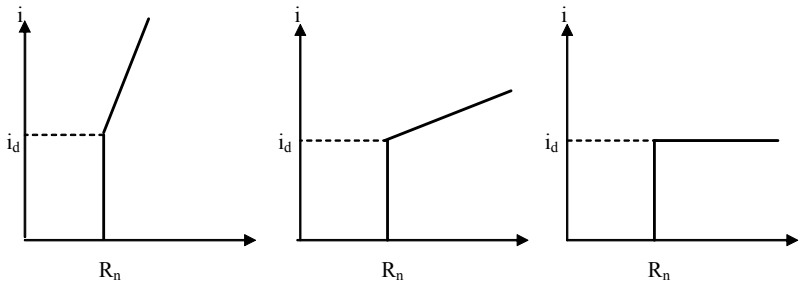
On January 9, 2003, the Federal Reserve introduced new lending programs, which are different from their predecessors in several aspects. The most significant changes are (1) the discount rates are now set above the prevailing federal funds rate, and (2) banks face very few restrictions on their use of primary credit. The proposal to make such changes is based on the following beliefs. First, it will eliminate the existing incentive for banks to borrow from the window to exploit the positive spread, and hence reduce the administration necessary for each discount loan. Second, as a result, it should help encourage banks to turn to the discount window only when the reserve markets tighten significantly and thereby the window serves as the last resort and a backup source of liquidity for individual depository institutions. Third, the discount rate will become an improved safety valve for releasing significant market pressures.

INSTRUCTORS' NOTES

The case introduces students to the application of the basic demand-and-supply framework to the analysis of conduct of monetary policy, in particular, the new credit program at the discount window adopted in January 2003 by the Federal Reserve System. Concepts involved in the case include demand and supply, reserve markets, discount rate, federal funds rate, discount window, interest rate stability, and monetary policy.

CASE QUESTIONS AND ANSWERS

1. In the reserve market, how do the Fed's restrictions on discount loans affect the supply curve? More specifically, what happens to the supply curve if the terms become more or less restrictive?



(a) When discount policy is more restrictive

(b) When the discount policy is less restrictive

(c) When there are no restrictions

Figure 1: The supply curves in the reserve market

The Fed can change the monetary base by using two monetary policy tools: (1) open market operations that determine the nonborrowed monetary base (Rn); and (2) discount policy that includes the discount rate and the terms on the restrictions. So, in general, the supply curve in the reserve market is kinked at the discount rate with two segments: the lower part is vertical, indicating the nonborrowed monetary base, whereas the upper part is determined by the terms specified in the discount policy. A steeper upper segment indicates more restrictive terms specified in the discount policy (panel (a) in Figure 1), and a flatter upper part reflects looser requirements for discount loans (panel (b) in Figure 1). As an extreme case, when all strings are taken away, the supply curve becomes L-shaped, see panel (c), Figure 1.

2. Why was the volume of discount loans relatively small even when the discount rate was set below the targeted federal funds rate (before January 2003)? What are the main costs under such a discount policy?

Traditionally (before January 9, 2003), the discount rate (iD) was set below the targeted federal funds rate (iff), but the terms specified in the discount policy were very restrictive. Hence, even though banks had an incentive to borrow from the discount window, they were simply not allowed to do so. As shown in Figure 2 below, the volume of discount loans remained small, since (iff - iD) was usually set pretty small and the supply curve is very steep.

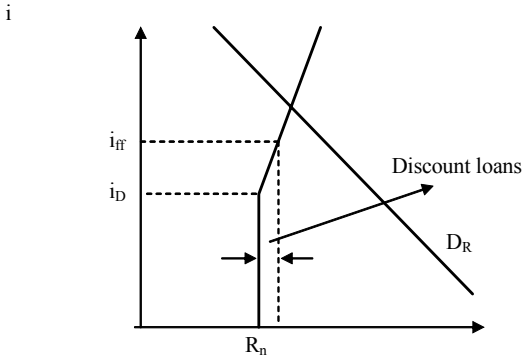


Figure 2. Equilibrium in the reserve market when $i_{ff} > i_D$

The main costs when the discount rate is set below the prevailing federal funds rate are transaction costs in administration. When the discount rate is below the federal funds rate, banks do have an incentive to borrow from the discount window so as to make some profit from re-lending the funds to the reserve market. If everyone could do it, then the discount window would no longer serve as the last resort for urgent funds. Very demanding restrictions that the Fed put on the discount loans essentially behave like credit rationing. The approval or disapproval of an application involves high administrative costs such as credit checking, proof of exhaustive sources from other opportunities, paper work, etc. As a result, banks are discouraged and may choose not to borrow from discount windows even when they really need to borrow for urgent cases. Thus the traditional restrictive discount policy would negatively influence the intended primary function of the discount window as the lender of last resort.

3. Before January 9, 2003, the discount rate was set below the federal funds rate. From then on, the Fed set the discount rate above the federal funds rate. Given a relatively stable demand on the same day in the reserve market, how did the Fed accomplish such a change if the federal funds rate were targeted unchanged? Are any other policy tool(s) involved?

The discount rate can be set administratively, while the federal funds rate can only be targeted indirectly through open market operations. The following figure shows how open market purchases must be done so as to keep iff unchanged wile the (new) discount rate (iD1) is reset above it.

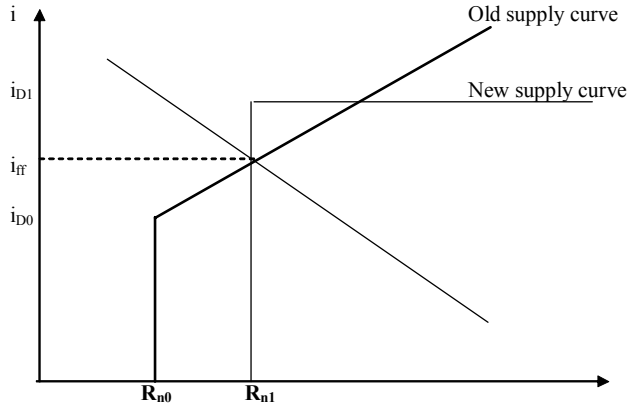


Figure 3. A comparison

4. When the discount rate is set above the targeted federal funds rate, do you expect the aggregate volume of discount loans (primary credit) to be high or low? Why? What is the difference between your answer here and that in question 2?

When the discount rate is set above the prevailing market interest rate, the volume of discount loans would be very low, unless the demand for reserves rises unexpectedly. However, unlike the answer given in question #2, the small volume of discount loans is not because the Fed does not lend at the low discount rate; rather, it is because banks have no incentive to borrow at a rate higher than what they can borrow from the federal funds market.

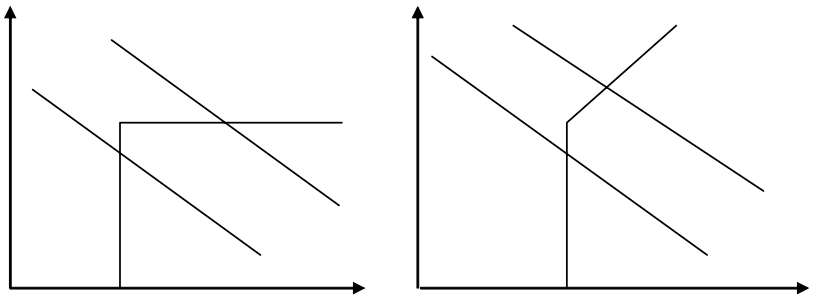
5. Compare the policies before and after January 9, 2003. Which policy makes the discount window serve as a better marginal source of reserves for the overall banking system? Why?

The new policy serves as a better marginal source of reserves than the old one. First of all, it is incentive compatible - only those banks that really need urgent funds for liquidity purposes would come to borrow from the discount window, simply because it is more expensive than the federal funds rate. Consequently, it costs much less than in the old program to help make the discount window the last resort for banks that really need urgent funds but cannot get them in the market. To set the "price" low and to refuse to sell by rationing would increase administrative costs by screening and monitoring potential borrowers. By setting the discount rate above the targeted federal funds rate, as long as the market rate does not rocket and touch the "ceiling", in theory, a bank comes to the discount window only when it cannot easily find the source of funds in the market.

On the other hand, from banks' perspective, to set the discount rate above the federal funds rate and to take the strings away can help make the discount loans really serve as the last resort much better than otherwise. When the discount rate is set below the market interest rate, if a bank comes to the window for a discount loan, it may negatively signal its financial weakness: either it cannot afford to pay a higher interest rate prevailing in the market, or it has exhausted all other possible sources. So, to reach the window could damage the bank's market value. Rather, if the Fed has authorized in advance a group of banks to be qualified for borrowing from the discount window, a bank would go to the window whenever it needs urgent funds but cannot get them easily from the market. In this scenario, to borrow from the discount window actually positively signals its financial strength, since at least it belongs to a pre-qualified group by the standard of the Fed. This way, the discount window can really serve as the last resort for urgent funds at much lower administrative costs.

6. Under the new policy, what is the most important point for the discount window credit to act as a short-run safety valve for the overall banking system by making additional reserves available, and for the discount rate act as a rate ceiling even if demand for reserve may sometimes rocket unexpectedly?

Discount window credit acts as a short-run safety valve only if the restrictions are completely taken away as shown in Figure 4, panel (a). If there is any restriction on the application for the discount loan, panel (b) may prevail. In that case, the discount rate as a cap may be broken and hence the discount window may not act well as the short-run safety valve.



(a) Discount rate as a ceiling (b) Discount rate fails to be a ceiling

Figure 4. Discount rate as a rate ceiling

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PREDICTING A BANK'S FAILURE: A CASE STUDY OF A MINORITY BANK

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CASE DESCRIPTION

The primary objective of this case study is to identify indicators that can predict a bank's failure. The secondary objectives are to highlight strategies to restore the financial health of a bank and evaluate the strengths and weaknesses of a bank's performance measures. The case has a difficulty level of three, appropriate to junior level students in money and banking, commercial bank management, strategic management and business policy courses. The case is designed to be taught in three class hours and is expected to require at least three hours of preparation.

The case study provides students ample opportunity to study the selected financial data, compute the critical ratios, analyze the trends in critical ratios, understand a bank's exposure to credit and investment risks, assess the strengths and weaknesses of bank's basic performance indicators and evaluate strategies to restore to health a dying financial institution

CASE SYNOPSIS

The case study describes the trials and tribulations of a minority owned bank that was established to provide loans to African American consumers who were underserved by other financial institutions. From its inception, the bank had a checkered history. The bank went through several management changes. On three separate occasions, the bank received an unsatisfactory audit from the federal regulators. There was a steady deterioration in bank's basic performance indicators: capital adequacy, ratio of non-performing loans, net charge off loans, net interest margin and rate of return on its assets and equity. The bank was finally acquired by another financial institution and restored to solvency though a variety of meticulously planned performance improvement strategies.

INSTRUCTORS' NOTES

DISCUSSION QUESTIONS

1 Define and explain the following:

Capital Adequacy Ratio
Loan Charge Offs Ratio
Net Interest Income
Net Interest Margin
Return on Assets
Return on Equity

Capital Adequacy Ratio is the ratio of equity capital to total assets. Capital adequacy ratio is often used as one of the measures of the risk of bank's failure. A steady decline in bank's adequacy ratio indicates a decline in the ability of a bank to absorb a loss in asset value without defaulting on its liabilities.

Loan Charge Offs Ratio is the ratio of the provision for loan losses to total receivable loans. The loan charge offs ratio measures precisely the amount of loans that were "written off" during the year to cover the unpaid and/or overdue loans. An escalation in the "loan charge offs" ratio is one of the indicators of the deterioration in financial health of a bank.

Net Interest Income is the difference between the total interest received and interest expense. The net interest income, aside from the other sources of income, is one of the most important indicators of a bank's profitability. A bank that has limited income from other sources cannot maintain its profitability if the net interest income steadily declines.

Net Interest Margin is simply the net interest income expressed as a percentage of the total assets. When net interest margin shrinks, it generally indicates a decline in profitability of a bank. However, with an increase in the importance of the other sources of bank's income (service charges, fees and other operating income), the decline in net interest margin by itself may not be enough to sound an alarm.

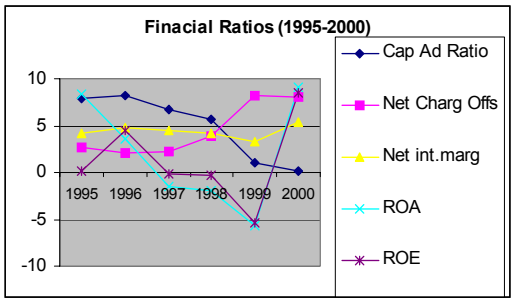
R*eturn on Assets (ROI)* is a widely used measure of profitability of a bank and is computed by expressing net income after taxes as a percentage of total assets. Again, a declining ROA is a matter of concern and can contribute to a failure of a financial institution.

Return on Equity (ROE) is a more narrow measure of a bank's success in using its equity capital. ROE is computed by dividing the net income after taxes by the amount equity capital. A steady decline in ROE can lead to a flight of capital from the bank and lead to its failure.

2. *Using the selected financial data of the bank under consideration, compute for each year (1995-2000) the capital adequacy ratio, loan charge offs ratio, net interest income, net interest margin, rate of return on assets, and the rate of return on equity.*

	1995	1996	1997	1998	1999	2000
Capital Adequacy Ratio	7.93	8.18	6.77	5.60	1.04	0.11
Net Interest Income (in thousands)	1,911	2,123	2,042	1,680	1,080	3,055
Nonperforming Loans	0.20	0.74	4.82	6.89	7.21	1.85
Net Interest Margin	4.13	4.62	4.49	4.12	3.45	5.38
Return on Assets	0.83	0.36	-1.45	-1.98	-5.65	0.91
Return on Equity	10.46	4.44	-21.34	-35.27	-542.33	8.57

3. Plot each of the ratios, and write three generalizations based on your analysis of the trend in these ratios. (Omit net interest income)



Generalization 1. The chart shows three distinct periods: 1995-1996, 1996-1999, and 2000.

Generalization 2. There was a slight improvement in the critical ratios between 1995-1996, a steady decline between 1996-1999 and a marked improvement in 2000.

Generalization 3. ROA, ROE, Net Interest Margin and Net charge Offs ratios move in tandem. A decline in ROA and ROE is accompanied by a flight of capital.

4. Identify factors that may Grove's NIM to have a steady decline.

The ability of a bank to garner a high interest rate from its borrowers and pay low interest rate to its depositors is determined by the competitive strength of the bank, service to the customers, and willingness to take loan risks. Grove is a relatively small bank (as indicated by the size of its assets and deposits) and, therefore, cannot effectively compete with other banks. The bank did extend some risky loans (see a steady increase in loan charge offs since 1996) but was unable to charge sufficiently high interest rate to increase its NIM.

5. How can a bank offset a decline in its NIM? Does the financial data of Grove suggest that it has the ability to offset the decline in its NIM?

One way to offset the decline in NIM is to increase income from sources other than interest. Many banks have increased their non-interest income by charging fees for their services rendered, insurance, trading, etc. the financial data indicates that Grove did not follow this pattern; the bank's the non - interest income declined by 58 percent between 1996-1999.

6. Visit the website Federal Financial Institutions Examinations Council (FFIEC) http://www.ffiec.gov/UBPR.htm. Select search for a Uniform Bank Performance Report; type certificate number 22238 and select report date as 12/31/1999. Open page 01 and compare the 1999 ratios for the bank with its peers and draw at least two generalizations.

Generalization 1. As expected, Grove compared unfavorably to its peers in all critical ratios. For example, the net interest income ratio for the bank was only 2.89 compared to the peer average of 3.02 and the bank average total loan and lease losses were 98 percent higher than the peer average.

Generalization 2. The bank's net income ratio was below the peer average, its loan losses were substantially higher than average, and its leverage capital (or capital adequacy) ratio of -1.31 was significantly lower than the peer average of 9.02. The situation was further exacerbated by the fact that the bank's growth rate of assets was negative (-25.16 percent) compared to a positive growth rate of 6.44 percent for the peers.

7. Refer to question #2. What ratios do you consider as the most significant in predicting a bank's failure and why?

The Loan Charge Off ratio and the Net Interest Margin are significant indicators of a bank's trouble when it's non-interest income contributions to total income is negligible or small. Whereas the former ratio is reflective of the past bad loans, the latter is indicative of the spread between the interest charged and interest received which determines the profitability of the bank

8. Read the performance strategies discussed in the case study and identify the two strategies that you consider to be the most significant. Explain why?

The most significant performance improvement strategies were (1) the establishment of a new loan committee and formulation of new guidelines for loan approval and (2) efforts to improve the quality of the current loan portfolio and the hiring of additional personnel to collect loans.

9. How are the performance strategies you identified in question number 8 related to the ratios you identified to be the most significant in question # 7.

Performance strategies #1 and #2 (see response to question # 8) are designed to decrease loan charge offs ratio and increase NIM respectively.

10. Compare the critical ratios for the period 1996-1999 to the critical ratios for the year 2000 (see your answer to question #2) and write at least two generalizations.

Generalization 1: Between 1996-1999, there was a marked deterioration in the loan charge offs ratio, capital adequacy ratio, net interest margin, return on assets and equity.

Generalization 2: The year 2000 was a watershed in the history of the bank. As a result of the implementation of the performance improvement strategies, all the critical ratios except capital adequacy ratio showed a significant improvement.

11. In your opinion did the management succeed in reversing the failing financial condition of the bank?

Yes, it halted the increasing trend in loan charge offs ratio, and improved the net interest income and NIM, and increased the return on assets and equity.

12. What additional measures would you suggest to improve the performance of the bank?

Increase the quantity and quality of business loans, offer more attractive rate and services to improve deposits, develop more aggressive marketing strategies, increase visibility in the business community, and establish correspondent relationship with major banks in and outside North Carolina to access broader markets in search of higher rate of return. The bank must eventually reduce its dependence on the deposits as a major source of funds because low cost bank deposits are shrinking. The bank should tap other sources of funds such as raising money over the Internet or through the subsidized Federal Home Loan Bank System.

THE SEDUCTION OF ARTHUR THOMPSON: AN INSTRUCTIONAL CASE ON ETHICS IN THE ACCOUNTING WORKPLACE

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CASE DESCRIPTION

This case focuses on ethics in the workplace - principally on the types of ethical issues facing an employee dealing with the financial management of a business. It was designed to help the student realize the implications of decisions regarding ethics and to recognize the difference between legal issues and ethical issues. This case is not highly technical and would be appropriate for inclusion in an introductory accounting or finance course. The case was designed to be presented over a single one-hour class period with only minimal preparation outside of class.

CASE SYNOPSIS

The myriad of news stories that have dominated the financial press at the outset of the 21st century have demonstrated, more than ever, the need for higher ethical standards among professional accountants. Unfortunately, teaching ethics in the classroom does not always translate into higher ethics among graduates. Barriers to adopting classroom ethics in the marketplace center on two facts: 1) that real-world pressures influence ethical decisions; and 2) that most ethical dilemmas involve the gradual "graying" of standards rather than the radical overthrow of such standards.

This case is a portrayal of a real-world situation where the main character was subjected to a series of ever-increasing ethical choices, while faced with severe financial consequences. Although the names and setting have been changed, the presented events mirror the challenges faced by the main character: Arthur Thompson. The case allows students to place themselves in the position of the main character, to make decisions, and to weigh the consequences of their actions. Each of the three ethical dilemmas faced by the main character is followed by instructional questions that help the students identify the differences between legal and ethical issues, create a framework for making ethical decisions, and recognize the impact of competing motivations.

INSTRUCTORS' NOTES

This case was written with the intent that each section of the case be handed out and studied individually. After the section is read, the students should take the time to discuss the questions

before proceeding to the next section. Particular attention should be given to the differences between legal standards and ethical standards, and on the consequences of each potential choice. Encourage the students to come up with their own creative choices.

After reading the conclusion of the case, take time to focus on the transformation of the main character from someone of high integrity, to someone who had compromised his standards. With perfect hindsight, should Artie have made a different decision at the first indications of unethical behavior? If so, at what point should a person quit his or her job in protest against unethical or illegal behavior? It is important for the students to understand that these are not easy choices.

To get the full impact of the case, it is important that the students realize that the events in the case are true; only the names and locations have been changed to protect the identities of the participants. The students must realize that they will face ethical dilemmas in the workplace. Further, the choices they make are not sanitary choices between right and wrong where the only consequence is whether or not their integrity is sacrificed. In the real world, such choices may have severe effects on the victim's career, family and financial condition.

Further, note that never once did Artie receive financial reward for sacrificing his integrity. Many students have the false impression that individuals engage in fraudulent activities to secure unearned financial rewards. In reality, many frauds are perpetrated just to allow employees to maintain their job, even when their performance is such that the job is deserved and the compensation received is fair given the labor performed.

One of the key points of this case is that what is legal and what is ethical are frequently two separate issues. It is very possible to be involved in activities where a person's moral or ethical standards are severely violated, even though no legal liability may be incurred. There is also a wide range of choices where contractual arrangements might be violated, but no criminal liability was incurred.

For example, while Artie may have a legal obligation to not participate in a scheme to defraud the IRS by not reporting cash sales, since he has no concrete evidence of the violation, is not signing any tax returns, is not preparing the tax returns, and is not receiving any monetary benefit from the alleged fraud, odds are good that the IRS would not pursue Artie in any type of fraud investigation. Although it might be pointed out that the IRS offers a finder's fee for help in detecting tax fraud, there are other potential consequences of being a whistle-blower. For example, in many cases, it has been difficult for a whistle-blower to secure further employment. Further, what would be the consequences if the IRS was notified and it was determined that no tax fraud had occurred?

In the second part of the case, it is obvious that cheating the drivers and paying them below the agreed-upon rate is a violation of contract as well as being unethical. However, it should be pointed out that it is unlikely that the violation would result in any criminal prosecution, even for those who intentionally defrauded the drivers. This incident would most likely result in a breach of contract

civil lawsuit against the firm and it is unlikely that Artie would be individually included in such a lawsuit.

In some cases, making the "ethical" choice may have adverse consequences not only on the perpetrator, but also on the victims. If information that the company had been cheating its drivers became known, odds are that the trust relationship between drier and company would have been destroyed, that the drivers would have left the firm en masse, and that the company could have been thrown into bankruptcy. Consequently, revealing to the drivers that they were being cheated could have potentially resulted in all of them losing their livelihood.

The third part of the case is the only portion with clear-cut choices. Not only would lying in a court of law be unethical, but there are also criminal penalties for perjury. Most students recognize the legal implications of the third decision and determine to leave the company rather commit a felony.

It is naïve to believe that there are no consequences if only ethical standards and not legal requirements are violated. One of the real consequences suffered by the main character in this account is the erosion of his personal standards and the accompanying loss of self-esteem and self-identity. Further, dishonesty can lead to severe financial consequences, even if no criminal liability is incurred.

Finally, the most important point of the case is that the deterioration of ethical standards is a gradual process of seduction. Every time standards are lowered, it becomes just that much easier to take the next step. It is unlikely that any of the major fraud cases began with an employee embezzling hundreds of thousands of dollars in his or her first criminal act. Most of these individuals probably began with small acts, such as padding expense accounts, taking unnecessary sick days, or stealing office supplies.

It is important that every employee have clearly marked lines of ethical behavior. It is recognized that such standards must be personally set, as each individual must feel a firm conviction to not compromise such standards. The students must recognize that the day will come when they will be faced with ethical challenges. The time to set their limits is now.

It is recommended that the students write a thought paper at the conclusion of this case to explore their own ethical limits. Recognize that the standards will vary radically from one student to the next. Encourage the students to be as open and honest as possible with their thoughts and feelings. Let the students know that they will be graded on the rational development of their own ethical framework, rather than on a naive commitment to never engage in any unethical behavior. The fact that the instructor will read the paper may censure what the student feels free to discuss and admit. It might be helpful to find a blind review format where the papers are submitted to an independent third party where the name might be removed. The paper is then graded by the instructor, based on the development of the ideas, without knowing the identity of the student. Finally, the instructor returns the paper to the third party who records the grades only on a grade sheet.

POWER PLAY IN A BUYER-SELLER AGREEMENT: A CASE OF EXTREME COMPETITION

Paul Esqueda, Penn State Berks-Lehigh Valley College
Denise T. Ogden, Penn State Berks-Lehigh Valley College

CASE DESCRIPTION

The primary subject matter of the case concerns power asymmetries in negotiation. Secondary issues examined include the effect of customer demands on price, time constraints involved in the negotiation and the contrast between distributive and integrative negotiation strategies. The case has a difficulty level of four. The case is expected to be taught in two hours with additional student preparation time of 30-45 minutes. Student preparation may be done inside or outside of the classroom. The case could be used in a strategy course, or as part of a conflict/negotiation module of a general course in business management.

CASE SYNOPSIS

Set in the context of a renegotiation of a sale agreement for equipment, this negotiation exercise explores the dynamics of two companies with power asymmetries. The role play activity highlights the difficulties of negotiating when there are changes occurring in the external and competitive environment. Several other concepts are illustrated including the effect of customer demands on price, time constraints involved in the negotiation and the contrast between distributive and integrative negotiation strategies.

INSTRUCTORS' NOTES

This case was written by: Paul Esqueda, Professor of Engineering, Division Head for Engineering, Business and Computing, Penn State Berks-Lehigh Valley College and Denise T. Ogden, Assistant Professor of Marketing, Penn State Berks-Lehigh Valley Collage. Both professors have experience in practice and teaching negotiation techniques. This case is based on an actual business situation and the story has been slightly changed for pedagogical reasons and to preserve the anonymity of the parties. Following are learning objectives, operational needs and operating procedures for implementing the case in a course. Lecture ideas, discussion questions and an explanation of what happened in the real-life negotiation are also included.

Learning Objectives

- To understand and gain practice in a conflict in which asymmetries in power exist
- Consider whether integrative potential exists in a negotiation that has distributive features
- Explore the role of power and alternatives in negotiation
- Understand the effect of time demands on price
- Demonstrate the potential for entrapment in a negotiation
- To explore some of the dynamics of trust and suspicion between groups
- Explore the role of ethics in a negotiation situation

OPERATIONAL NEEDS

Group size: Two small groups are used to role-play the company teams involved in the negotiation.

Time required: About 30-45 minutes to read the case and prepare for the negotiation; 60 minutes to role-play; 50-60 minutes to discuss and summarize and discuss key principles.

Materials: The case must be copied for the class in which the case is to be taught. The instructor should make one copy of each case for each student. Copies are also needed for the confidential information given to each team member participating in the role-play.

Physical Requirements: A room that is big enough where the teams can discuss strategy privately within their teams. Where possible, two "break-out" rooms can be used for maximum privacy.

OPERATING PROCEDURE

- Choose two teams (3 to 5 members/team). Each team will role-play either the management team of Fresh Water Mining Co. or the management team of the Dutch Royal Fluorescence X-Ray B.V. company. The teams should sit far enough from each other to allow private meetings. If possible, a breakout room should be used to ensure privacy.
- Have students read the background information for case and answer any preliminary questions. Next, hand out each team's "confidential information" sheets that provide additional information for the exercise.
- Allow each team to read and discuss their negotiation strategy (20-30 minutes).
- Have the teams conduct the role play in front of the rest of the class.

- Class debriefing and discussion of the negotiation exercise will take anywhere from 30-75 minutes, depending on the depth and sophistication of the discussion.

LECTURE CONCEPTS

This case provides the opportunity to illustrate many concepts that occur in negotiation that can be highlighted during discussion:

Power - The case illustrates the idea that power in negotiation is a function of alternatives.

Relationships - Past negotiating relationships set the context for the current negotiation.

Time Pressure - Time plays a role in this case because FWMC has placed pressure on Royal X-ray. If Royal X-ray does not agree to the demands, the parties will have to resort to alternatives.

BATNA (Best Alternative to a Negotiated Agreement) - When one party has an alternative, the dynamics of the negotiation can change. In this case, FWMC has been approached by a competitor who is willing to do whatever it takes to win their business.

Anchoring and Adjustment - The initial price set an anchor by which subsequent adjustments in price are measured during the negotiation. Due to changes in the external environment, FWMC is attempting to adjust the price.

Entrapment - There may be some pressure for FWMC to "settle at all costs." This perspective may lead to entrapment. In this scenario, Royal X-ray feels compelled to give in to FWMC demands regardless of potential losses. The time and effort already invested in the deal makes it more difficult for FWMC to back out.

Ethics - In many negotiation situations both parties practice bluffing. Although this practice is widely practiced and accepted, some believe this is lying and this practice may raise ethical questions.

LECTURE MATERIAL

Several models may be applied to this situation, suggestions are as follows:

- *Integrative vs. Distribution Negotiations* - This case provides an opportunity to discuss distributive vs. integrative negotiations and the mixed-motive characteristics of a negotiation.

Thompson, L. (1998). *The mind and heart of the negotiator*. Upper Saddle River, New Jersey: Prentice Hall.

- *Seven Elements of Successful Negotiation* - The seven elements as described by Fisher and Ertel are interests, options, alternatives, legitimacy, communication, relationship and commitment. A lecture is appropriate and can be done before of after the role-play.

Fisher, R. and Ertel, D. (1995). *Getting ready to negotiate: The getting to yes workbook.* New York: Penguin.

- *Five Forces Analysis* - The analysis of Porter's five forces that drive competition can be used as a basis for discussion:

  Threat of new entrants
  Threat of substitute products or services
  Bargaining power of suppliers
  Bargaining power of buyers
  Rivalry among existing firms

Porter, M. E. (1980). *Competitive strategy, techniques for analyzing industries and competitors.* New York: The Free Press.

- *Ethics* - Wokutch and Carson view analyze bluffing from an economic gain perspective. Reitz, Wall and Love describe questionable negotiation tactics and ethical criteria. Both articles provide a base for an ethics-based discussion.

Wokutch, R. E.& Carson, T. L. (1981). The ethics and profitability of bluffing in business. *Westminster Institute Review, 1*(2), 77-83.
Reitz, H.J., Wall, J.A. & Love, M.S. (1998). Ethics and negotiation: Oil and water or good lubrication? *Business Horizons*, (41), 5-14.

DISCUSSION QUESTIONS

The following discussion questions may be used for discussion:

1. What potential problems did Royal X-ray identify prior to the negotiation? What problems emerged during the negotiation?

2. What did each side bring to the negotiation as factors with which to negotiate?

3. How effectively did the Royal X-Ray team approach the negotiation?

4. How effectively did Fresh Water Mining Company team approach the negotiation?

5. What are the interests, goals, and alternatives of the parties? What is each party's BATNA (best alternative to a negotiated agreement)?

6. What effect did competition have on the dynamics of the negotiation?

7. How did asymmetries in the power relationship between the two companies effect the negotiation?

8. Was this an integrative negotiation or a distributive negotiation? Why? Were there any attempts at creative problem solving?

9. Did you reach an agreement in this negotiation? If so, how satisfied are you with the price? If not, is there anything that could have been done to reach agreement?

10. If you reached a settlement, how does the settlement price compare to the initial contract agreement? Who "won" in this exercise?

11. What areas involved ethics in the negotiation? Is bluffing an accepted practice? When does bluffing cross the line into unacceptable behavior?

EPILOGUE

This case is based on an actual business situation and the story has been slightly changed for pedagogical reasons and to preserve the anonymity of the parties. The main outcome of the meeting between FWMC and Royal X-Ray after the latter won the bid was that Royal X-Ray conceded to all the requests made by FWMC with very little gain for the Royal X-Ray negotiating team. Royal X-Ray opted for a strategy of preserving such an important customer at all cost in light of a very aggressive competition. In essence, Royal X-Ray accepted changes in the order that resulted in a drastic reduction in their profit margin.

The general manager of Royal X-Ray for the Latin American region was highly distressed by the outcome of this negotiation. Although, he understood the entrapment situation, he questioned the negotiating skills of his sales force. As a consequence of his disappointment, Royal X-Ray

organized a one-day negotiation workshop during the three-day annual meeting for its Latin American sales force in Amsterdam. This simulation case was commissioned to one of the authors of this paper and it was given to the participants during that workshop as a final case.

Three teams (A, B and C) of six negotiators were set up to negotiate the same case. The teams were further subdivided so that both FWMC and Royal X-Ray had three negotiators. Table 3 summarizes the results of the simulation.

Table 3: Summary of agreements between FWMC and Royal X-Ray

(Simulation in Holland, January 2004)

	Team A	Team B	Team C
Price	Same as original quote	Same as original quote	Same as original quote
Delivery time	8 weeks	10 weeks	10 weeks
Down payment	20% at signing order 30% with delivery of equipment 50% acceptance test	68% at signing order	50% at signing order
Others	Down payment check paid today	Down payment check paid today	Down payment check paid today

It is evident from these results that the party with the upper-hand exercised all its power, despite both parties having full knowledge of the outcome of the real-life situation. Royal X-Ray conceded in all three simulations with slightly different gains in cash flow in each group for the whole project.

The general manager had been assigned the role of FWMC in one of the negotiating tables (A) since he had complained bitterly about the outcome of the real-life negotiation. During the debriefing period of the simulation, he was asked why he had not been more magnanimous to Royal X-Ray and he replied that they had not made a compelling case. In the real situation it could have been an issue of not framing the negotiation properly. The similarity of outcomes in the three cases reveals that an excessive power asymmetry provides strong leverage and allows the dominant party to impose its will upon the other. In this particular case, the power asymmetries arise from FWMC being the dominant customer in that market and for having a solid BATNA (Japanese X-Ray).

ADDITIONAL READING RESOURCES

Bazerman, M. & Neale, M. (1992). *Negotiating rationally*. New York: Free Press.

Bowen, D.D., Lewicki, R.J., Hall, D.T. & Hall, F.H. (1997). *Experiences in management and organizational behavior*, (Fourth Edition). New York: John Wiley.

Brockner, J., Shaw, M. C., & Rubin, J. Z. (1979). Factors affecting withdrawal from an escalating conflict: Quitting before it's too late. *Journal of Experimental Social Psychology, 15,* 492-503.

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Kristensen, H. & Garling, T. (1997). The effects of anchor points and reference points on negotiation process and outcome. *Organizational Behavior and Human Decision Processes, 71*, 85-94.

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Rubin, Jeffrey Z. (1981). Psychological traps. *Psychology Today*, (March), 55- 61.

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A TALE OF TWO AIRLINES: WESTJET AND CANADA 3000

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CASE DESCRIPTION

The primary subject matter of this case is concerned with the financial risks in the Canadian Airline Industry. Secondary issues examined include financial structures and utilization of capital within airline companies. The case has a difficulty level of three and should be appropriate for undergraduate and graduate courses in financial and strategic management. The case is designed to be taught in one to two class hours, with three hours of outside preparation by students.

CASE SYNOPSIS

Over the last twenty years, shareholders, financial institutions, and the general public who associate with the airline industry have seen a battlefield littered with airline casualties. All airlines, from large international carriers such as United Airlines, Swiss Air, and Air Canada to small short haul carriers such as WestJet have faced enormous risks in their operations. The Gulf War and the War in Iraq, high oil price volatility, the threat of terrorism, and lately SARS all have had a negative impact on airlines around the globe. Many airlines have seen losses, reduced capacity, and large layoff. However, a few exceptional airlines have been able to stay profitable even in such a demanding business environment. In this case study we explore two Canadian airlines: WestJet and Canada 3000. The former is an example of an airline that is thriving despite the hostile business environment while the later is an example of an airline that failed shortly after September 11, 2001. Why did this happen? Both airlines were of similar size and initially followed a similar strategy. However, one succeeded, one did not. The major factors that explain WestJet's success and Canada 3000's failure are examined. While we use two Canadian airlines for the analysis, the lessons learned are applicable to airlines in other countries as well.

INSTRUCTORS' NOTES

Recommendations for Teaching Approaches

This case presents numerous opportunities for analysis and discussion. Students can initially work on the case individually but it is a nice case for discussion among small groups or as a class led by the instructor.

The teaching objectives for this case are:

1.	Introduce students to the business model of the airline industry.
2.	Illustrate the difficulties of being a consistently profitable airline.
3.	Determine the key characteristics to being a successful and profitable airline.
4.	Determine the risk involved in leasing vs. purchasing.
5.	Use financial ratios to determine leverage and profitability.
6.	Examine the pitfalls of rapid expansion and mergers.

SUGGESTED QUESTIONS

1. Both Canada 3000 and WestJet were profitable airlines in 2000. Examine their strengths and weaknesses and what factors led to Canada 3000's demise and WestJet's prosperity.

WestJet is an innovative airline modeled after the highly successful, no frills, Dallas-based Southwest Airlines and other low cost carriers with similar structures including Ryan Air and Air Tran. Their flights are considered inexpensive and their staff is known to be young and upbeat. This has allowed the airline to woo, from cars and busses, a new type of air passenger. Although the frequency of flights is less than the traditional airline and the airports used are often smaller than those used by most airlines, the nonbusiness, value-seeking flyer is willing to trade convenience for savings. WestJet educates their current and future passengers on economical air travel and stimulates demand by providing the service at the lowest possible price. In terms of operations, the company only expanded when the

company was profitable. Therefore, the majority of their aircrafts were purchased through raised share capital and some long-term debt. The company's use of debt was limited and capital leases regarding aircrafts were very few in number.

Canada 3000 began as a holiday charter airline for vacationers, transforming itself into a major and profitable low-cost airline in early 2000. Unlike WestJet, Canada 3000 leased most of its airline fleet putting a major burden on its cost structure. After becoming a successful competitor in the low-cost market, Canada 3000 began a major expansion campaign in an effort to compete with Canada's premier airline, Air Canada, and other rivals. The foundation of its expansion included the acquisitions of its charter rivals Royal Aviation Inc. for $84 million and CanJet Airlines for $7 million. Prior to the acquisitions, Royal Aviation had not seen a profit for two years and CanJet was most likely headed for bankruptcy. These acquisitions did provide additional routes and staff in Eastern Canada; however, the additional aircraft from the merger doubled Canada's 3000 fleet creating a fleet that was hodgepodge in nature leading to major increases in maintenance bills as well as additional lease obligations. As a result of the acquisitions, Canada 3000 veered away from its original business plan, as a discount carrier, to an airline offering different classes of service and frequent-flyer points to lure business travelers. This would be considered the cost structure of a premium-priced carrier, not that of a discount carrier.

2. Canada 3000 leased the majority of its aircraft. WestJet purchased the majority of its aircraft leasing only a small percentage. How does leasing affect the financial structure of a firm? Why would a firm decide to lease vs. purchase?

A lease agreement can be a capital lease or an operating lease. If it is a capital lease, it is included in the body of the balance sheet with the leased property being an asset and the lease obligation being a liability. An operating lease is disclosed only in the footnote of the balance sheet. Canada 3000's leased aircraft were operating leases and thus do not appear on the balance sheet potentially misleading analysts, creditors and investors about the true amount of financial leverage that Canada 3000 really had.

There are various reasons why a firm would decide to lease an asset instead of purchasing the asset. In the case of Canada 3000, it seems that the operating leases were a way to acquire the needed aircraft without using large amounts of capital. The firm would need capital, either debt or equity, to purchase the aircraft. Canada 3000 was already highly leveraged and most likely unable to borrow substantial amounts of additional capital. Although the leases did not increase the traditional measure of leverage for Canada 3000, they did create large fixed costs negatively impacting the firm's bottom-line and even its ability to stay solvent.

3. Compare the financial ratios for both WestJet and Canada 3000 in the areas of financial leverage and profitability.

WestJet's and Canada 3000's financial ratios are very different. Looking at liquidity, leverage and profitability it is easy to see the financial strength of WestJet compared to Canada 3000.

	2001	**2000**	**1999**
Liquidity (CA/CL)			
WestJet	0.90	1.02	1.21
Canada 3000	0.73	0.85	0.72
Debt Ratio (Debt/Equity)			
WestJet	0.77	0.86	0.97
Canada 3000	2.29	5.17	11.79
Net Profit Margin (NI/Sales)			
WestJet	7.78%	9.10%	7.78%
Canada 3000	1.88%	1.27%	-1.82%
ROA (NI/Assets)			
WestJet	9.44%	8.97%	8.48%
Canada 3000	4.03%	5.36%	-7.66%
ROE (NI/Equity)			
WestJet	16.74%	16.71%	16.76%
Canada 3000	13.26%	35.66%	-124.87%

It is important to note that although Canada 3000's net income for 2001 was positive with an increase of approximately 100% over 2000 the number is misleading as well as the ratios based on number. The year-end for Canada 3000 was April 2001. The income number reflects Canada 3000 prior to the two acquisitions and 9/11. It is interesting that the firm went from such good financial performance to bankruptcy in a matter of seven months.

4. Presume you are an entrepreneur and are interested in starting a new airline. What are the major factors that you feel can make an airline successful. What factors make it difficult for any airline to be successful?

If we examine the airlines that have been consistently profitable such as Southwest Airlines, Morris Air and WestJet we see similarities. Some are:

- Have a well defined business plan and stick to it
- Low-cost provider
- Have niche markets
- Expand slowly and only when profitable

There are many factors that make it difficult for an airline to prosper. Some are:

- High fuel costs
- Volatility of demand
- Large fixed costs of aircraft

5. If you were the CFO of Canada 3000 before its demise, what would you have done differently in order to avoid bankruptcy?

An astute CFO may have been able to convenience the management team of Canada 3000 that it was about to make two obvious blunders. The first was its veering away from its original business plan as a discount carrier to a premium-priced carrier in order to compete with Air Canada in the fiercely competitive domestic market. The other was the misguided expansion. The acquisitions of Royal Aviation Inc. and CanJet were poor investment decisions. Neither airline was showing a profit nor are most mergers in the airline industry successful (out of 18 mergers in the US airline industry during the 1980s only one was successful).

The economy was also beginning to slow which usually has a negative impact on the airline industry and thus is a bad time for a company to expand and incur more debt. Unfortunately it would have taken a crystal ball to know that September 11 was just around the corner.

6. Why do you feel the management of Canada 3000 decided to purchase Royal Aviation Inc. and CanJet Airlines?

The fierce desire to expand and compete with Canada's largest airline, Air Canada, as well as WestJet. Purchasing the airlines would give Canada 3000 a stronger presence in Eastern Canada, more aircraft and additional airport slots. All of these factors would seem positive for an airline with a desire to expand. However, with any capital budgeting decision, cost of the investment is a major consideration. Management will frequently overpay for an

acquisition which results in a dilution of shareholder wealth. In the case of Canada 3000 acquiring two failing airlines, it appears that shareholder wealth was diluted to zero.

7. What other Airlines have declared bankruptcy? Why do you feel a large percent of airlines are not profitable?

There are many casualties in the airline industry. Some firms that have declared bankruptcy or Chapter 11 protection are American Airlines, US Airways, United Airlines, Continental Airlines and Air Canada (see epilogue).

The airline industry is a very difficult industry in which to operate and prosper. The financial risk for most airlines is high. The industry is highly capital intensive and thus most airlines are highly leveraged. Many have both financial leverage (due to borrowing to purchase assets) and operating leverage (due to leasing assets), compounding the effects of leverage. High leverage increases interest costs and/or leasing costs thus impacting profitability not to mention viability.

The airline industry is also plagued with business risk, those risk associated with the business itself. A very large expense for airlines is fuel. With the cost of fuel very volatile and in recent years very high this impacts the ability of the airline to turn a profit as well. Demand is also volatile. When the economy is slow airline travel slows and so do airline revenues. It is detrimental for a firm to operate with high financial risk in an industry with a high degree of business risk. Most of the airlines that have prospered have developed and followed a comprehensive business plan emphasizing low-cost and niche markets and a financial model that focuses on low financial leverage.

EPILOGUE

Canada 3000 flew its' last flight in November of 2001 leaving behind Air Canada and WestJet flying the skies. In just over two years, Air Canada declared bankruptcy. The skies have been much brighter for WestJet. As Air Canada was declaring bankruptcy, WestJet posted its' 28th consecutive profitable quarter and was awarded Canada's Most Respected Corporation for 2003. In 2004, WestJet is expanding its operations with new routes into the United States, thus becoming an international air carrier.

THE CASE OF 'FOR A FEW DOLLARS MORE'

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CASE DESCRIPTION

This case starts with a nasty divorce, but shifts to an apparently amicable ending with the husband agreeing to give his wife all of the joint assets. But he ends up murdered the day before he intends to sign the papers. With the wife set to receive all of the assets through the divorce, and since there are no children and no will to provide alternative beneficiaries, the question becomes who benefits by his death.

CASE SYNOPSIS

The most obvious suspect in the highly publicized murder is the spouse, as is often the case. And the spouse appears to have the opportunity to commit the crime, and the means (a letter opener) is not an issue, but she has no apparent motive to commit the murder. A conviction is usually a function of means, motive, and opportunity. It takes an accountant to solve the case, convict the spouse, and implicate her most recent lover.

INSTRUCTORS' NOTES

In the majority of states (such as Georgia), equitable division rules govern property transactions between spouses at times of divorce or death. In Georgia, for instance, if a husband and his wife bought Microsoft stock in 1980 for $2 and saw it grow to 1,000,000--if the husband died and left his share to the wife, his basis in the stock would be stepped up to $500,000. The wife would continue to have a $1 Basis for her half and would acquire the stepped up basis for the inherited share. If she sold the stock, she would have a gain (1,000,000 - 500,001)=499,999. She would pay 15% capital gains tax and owe $75,000 in taxes.

Community property states (California, La, Texas) have been granted a further tax "loophole" by the Code when dealing with inherited property from a spouse. In these states, if a spouse dies, the LIVING SPOUSE's tax basis is *also* adjusted upward in addition to her deceased husbands. For instance, in the example above, the wife would have a full basis of 1,000,000 and

could sell the stock and not have to pay any capital gain taxes. Thus, it is a great thing to be a California widow(er). From a tax point of view, a couple with appreciated portable assets may even consider moving to a community property state if one party becomes terminally ill.

In this case, if Anita obtained Edward's shares through gift, the $100,000 basis would continue, and she would have a large gain ($99,900,000) upon which she would have to pay taxes at some point. However, with his death there is no gain because of the increased basis. The savings will be $99,900,000 times the capital gains tax rate. Note that in all states there are still "financial incentives" to commit murder, but the incentives are magnified in states such as California.

THE USE OF BUILDING MORATORIA TO CONTROL GROWTH IN RURAL COMMUNITIES

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CASE DESCRIPTION

The primary subject matter of this case concerns Business Law and Real Estate. Secondary issues examined include issues commonly experienced by local governments and real estate developers. The case is appropriate for junior level. The case is designed to be taught in two to three class hours and is expected to require three to five hours of outside preparation by students.

CASE SYNOPSIS

Today, many rapidly growing communities find that their infrastructure is not capable of keeping up with the pace of development. Imposing building moratoria gives communities time to plan without the pressure of impending growth, however their legality is often aggressively challenged. This case addresses the issue from a legal and public policy perspective and examines when, and under what circumstances, municipalities may legally employ this planning tool.

INSTRUCTORS' NOTES

Case Overview

The Town of Pleasant Oaks faces a problem that many local governments must deal with as they encounter growth pressure from real estate developers. While the local government attempts to plan for its community's future, it may be flooded with requests from those who seek to develop land under the current, relatively lax, laws that in many instances encourage random, unplanned development. To prevent such a flurry of development activity, the local government may often be able to take advantage of a planning tool that will allow it some breathing room in its efforts to effectively plan for desired growth. This tool is often called an interim development control or an uncompensated development moratorium (hereinafter referred to as "moratorium").

TEACHING OBJECTIVES

The teaching objectives of this case are to provide students with a background for:

1. Correctly identifying and appreciating the tension between local government planning and real estate developers' interest in growth
2. Demonstrating an understanding of the legal cases and a legal tool that may be used by local governments to temporarily delay development and provide for the opportunity to plan for growth
3. Interpreting, evaluating and analyzing the legal materials to determine if the moratorium may be used in this particular case
4. Recommending a solution to the local government that provides for orderly growth and development

QUESTIONS/ANSWERS

1. Does pleasant Oaks have a solid legal foundation for stopping all development, and would such action be considered a regulatory "taking", requiring compensation to the landowners being temporarily denied the right to develop their property?

The United States Supreme Court in *Tahoe-Sierra Preservation Council, Inc. v Tahoe Regional Planning Agency*, 122 S Ct 1465 (2002) has recently approved of the use of moratoria, at least under certain circumstances. In this landmark case, the local planning organization imposed a 32-month moratorium on development in a specific geographical area under its authority, while it sought to create a comprehensive plan to provide for orderly and environmentally sound growth. The developers claim that the moratorium on development, ordained by the local government, constituted a taking of their property without compensation in contravention of the Constitution of the United States (Fifth and Fourteenth Amendments).

The Court analyzed this case by first noting the distinction between the physical taking of property by the government (compensable) and a regulatory taking of the property by the government (not necessarily compensable). The court stated in *Tahoe* at 1478-1480:

> The text of the Fifth Amendment itself provides a basis for drawing a distinction between physical takings and regulatory takings. Its plain language requires the payment of compensation whenever the government acquires private property for a public purpose, whether the acquisition is the result of a condemnation proceeding or a physical appropriation. But the Constitution contains no comparable reference to regulations that

prohibit a property owner from making certain uses of her private property.[17] Our jurisprudence involving condemnations and physical takings is as old as the Republic and, for the most part, involves the straightforward application of *per se* rules. Our regulatory takings jurisprudence, in contrast, is of more recent vintage and is characterized by "essentially ad hoc, factual inquiries," *Penn Central*, 438 US, at 124, 57 L Ed 2d 631, 98 S Ct 2646, designed to allow "careful examination and weighing of all the relevant circumstances." *Palazzolo*, 533 US, at 636, 150 L Ed 2d 592, 121 S Ct 2448 (O'Connor, J., concurring).

When the government physically takes possession of an interest in property for some public purpose, it has a categorical duty to compensate the former owner, *United States v Pewee Coal Co.*, 341 US 114, 115, 95 L Ed 809, 71 S Ct 670 (1951), regardless of whether the interest that is taken constitutes an entire parcel or merely a part thereof. Thus, compensation is mandated when a leasehold is taken and the government occupies the property for its own purposes, even though that use is temporary. *United States v General Motors Corp*., 323 US 373, 89 L Ed 311, 65 S Ct 357 (1945), *United States v Petty Motor Co*., 327 US 372, 90 L Ed 729, 66 S Ct 596 (1946). Similarly, when the government appropriates part of a rooftop in order to provide cable TV access for apartment tenants, *Loretto v Teleprompter Manhattan CATV Corp*., 458 US 419, 73 L Ed 2d 868, 102 S Ct 3164 (1982); or when its planes use private airspace to approach a government airport, *United States v Causby*, 328 US 256, 90 L Ed 1206, 66 S Ct 1062 (1946), it is required to pay for that share no matter how small. But a government regulation that merely prohibits landlords from evicting tenants unwilling to pay a higher rent, *Block v Hirsh*, 256 US 135, 65 L Ed 865, 41 S Ct 458 (1921); that bans certain private uses of a portion of an owner's property, *Village of Euclid v Ambler Realty Co.*, 272 US 365, 71 L Ed 303, 47 S Ct 114 (1926); *Keystone Bituminous Coal Assn. v DeBenedictis*, 480 US 470, 94 L Ed 2d 472, 107 S Ct 1232 (1987); or that forbids the private use of certain airspace, *Penn Central Transp. Co v New York City,* 438 US 104, 57 L Ed 2d 631, 98 S Ct 2646 (1978), does not constitute a categorical taking. "The first category of cases requires courts to apply a clear rule; the second necessarily entails complex factual assessments of the purposes and economic effects of government actions." *Yee v Escondido*, 503 US 519, 523, 118 L Ed 2d 153, 112 S Ct 1522 (1992). See also *Loretto*, 458 US, at 440, 73 L Ed 2d 868, 102 S Ct 3164 *Keystone*, 480 US at 489, n 18, 94 L Ed 2d 472, 107 S Ct 1232.

This longstanding distinction between acquisitions of property for public use, on the one hand, and regulations prohibiting private uses, on the other, makes it inappropriate to treat cases involving physical takings as controlling precedents for the evaluation of a claim that there has been a "regulatory taking," [18] and vice versa. For the same reason that we do not ask whether a physical appropriation advances a substantial government interest or whether it deprives the owner of all economically valuable use, we do not apply our precedent from the physical takings context to regulatory takings claims. Land-use regulations are ubiquitous and most of them impact property values in some tangential way - often in completely unanticipated ways. Treating them all as *per se* takings would transform government regulation into a luxury few governments could afford. By contrast, physical appropriations are relatively rare, easily identified, and usually represent a greater affront to individual property rights.[19] "This case does not present the 'classi[c] taking' in which the

> government directly appropriates private property for its own use, "*Eastern Enterprises v Apfel*, 524 US 498, 522, 141 L Ed 2d 451, 118 S Ct 2131 (1998); instead the interference with property rights "arises from some public program adjusting the benefits and burdens of economic life to promote the common good," *Penn Central*, 438 US, at 124, 57 L Ed 2d 631, 98 S Ct 2646.

The Court then went on to indicate that while, *Lucas v South Carolina Coastal Council*, 112 S Ct 2886 (1992), requires the local government to compensate landowners, where the regulation denies all economically beneficial or productive use of land, it does not follow that compensation is always required whenever a government imposes a moratorium on development. Again, in *Tahoe* at 1482-1483, the Court stated:

> Similarly, our decision in *Lucas* is not dispositive of the question presented. Although *Lucas* endorsed and applied a categorical rule, it was not the one that petitioners propose. Lucas purchased two residential lots in 1988 for $975,000. These lots were rendered "valueless" by a statute enacted two years later. The trial court found that a taking had occurred and ordered compensation of $1,232,387.50, representing the value of the fee simple estate, plus interest. As the statute read at the time of the trial, it affected a taking that " was unconditional and permanent." 505 US, at 1012, 120 L Ed 2d 798, 112 S Ct 2886. While the State's appeal was pending, the statute was amended to authorize exceptions that might have allowed Lucas to obtain a building permit. Despite the fact that the amendment gave the State Supreme Court the opportunity to dispose of the appeal on ripeness grounds, it resolved the merits of the permanent takings claim and reversed. Since "Lucas had no reason to proceed on a 'temporary taking' theory at trial," we decided the case on the permanent taking theory that both the trial court and the State Supreme Court had addressed. *Ibid.*
>
> The categorical rule that we applied in *Lucas* states that compensation is required when a regulation deprives an owner of "*all* economically beneficial uses" of his land. *Id*., at 1019, 120 L Ed 2d 798, 112 S Ct 2886. Under that rule, a statute that "wholly eliminated the value" of Lucas' fee simple title clearly qualified as a taking. But our holding was limited to " the extraordinary circumstance when no productive or economically beneficial use of land is permitted." *Id*., at 1017, 120 L Ed 2d 798, 112 S Ct 2886. The emphasis on the word "no" in the text of the opinion was, in effect, reiterated in a footnote explaining that the categorical rule would not apply if the diminution in value were 95% instead of 100%. *Id*., at 1019, n 8, 120 L Ed 2d 798, 112 S Ct 2886. [24] Anything less than a "complete elimination of value" or "a total loss," the Court acknowledged, would require the kind of analysis applied in *Penn Central. Lucas*, 505 US, at 1019-1020, n 8, 120 L Ed 2d 798, 112 S Ct 2886.[25]

Instead, the Court in *Tahoe* at 1486-1487, suggested that:

> Unlike the "extraordinary circumstance" in which the government deprives a property owner of all economic use, *Lucas,* 505 US, at 1017, 120 L Ed 2d 798, 112 S Ct 2886, moratoria like Ordinance 81-5 and Resolution 83-21 are used widely among land-use planners to preserve

> the status quo while formulating a more permanent development strategy. [32] In fact, the consensus in the planning community appears to be that moratoria, or "interim development controls" as they are often called, are an essential tool of successful development. [33] Yet even the weak version of petitioners' categorical rule would treat these interim measures as takings regardless of the good faith of the planners, the reasonable expectations of the landowners, or the actual impact of the moratorium on property values.[34]
>
> The interest facilitating informed decision-making by regulatory agencies counsels against adopting a *per se* rule that would impose such severe costs on their deliberations. Otherwise, the financial constraints of compensating property owners during a moratorium may force officials to rush through the planning process or to abandon the practice altogether. To the extent that communities are forced to abandon using moratoria, landowners will have incentives to develop their property quickly before a comprehensive plan can be enacted, thereby fostering inefficient and ill-conceived growth.

The Court concluded in *Tahoe* at 1485, that "fairness and justice" will be best served by relying on the familiar *Penn Central Transportation Co. v City of New York,* 98 S Ct 2646 (1978) approach when deciding cases like this, involving what is commonly referred to as "partial taking", rather than by attempting to craft a new categorical rule. In *Penn Central* at 2659, the Court stated:

> In engaging in these essentially ad hoc, factual inquiries, the Court's decisions have identified several factors that have particular significance. The economic impact of the regulation on the claimant and, particularly the extent to which the regulation has interfered with distinct investment-backed expectations are, of course, relevant considerations. See *Goldblatt v Hempstead*, supra, 369 U.S., at 594, 82 S Ct, at 990. So, too, is the character of the governmental action. A "taking" may more readily be found when the interference with property can be characterized as a physical invasion by government, see, e.g., *United States v Causby*, 328 U.S. 256, 66 S Ct 1062, 90 L.Ed. 1206 (1946), than when interference arises from some public program adjusting the benefits and burdens of economic life to promote the common good.

Thus, the court gave the green light to local governments to use moratoria in their efforts to provide sensible and controlled growth; of course states may also have their own takings law. In Wisconsin, for example, Article I, Subsection 13 of the Wisconsin Constitution states, "the property of no person shall be taken for public use without just compensation thereof." Interpreting this provision in *Buhler v Racine County*, 33 Wis 2d 137, 143, 146 NW 2d 403, 406 (1966), the Wisconsin Supreme Court stated, that to establish a regulatory taking the regulation must be one that, "practically or substantially renders the land useless for all reasonable purposes." Clearly, Wisconsin and Federal law are in harmony.

2. In the event that Pleasant Oaks does impose a temporary moratorium on development, what would the duration of the moratorium be, and is it necessary during the moratorium to develop a comprehensive land use plan, or is it sufficient to amend existing plans or ordinances?

While the *Tahoe* case (and perhaps state law) gives state and local government constitutional permission to use the uncompensated development moratorium tool, at least under certain circumstances, for a local government to enact such an ordinance, it must be either expressly or impliedly authorized by state law. For example, in Wisconsin, the use of moratoria is expressly provided for by Wis. Stats. Sect 62.23 (7) (da), *"Interim zoning.* The common council of any city which has not adopted a zoning ordinance may, without referring the matter to the plan commission, enact an interim-zoning ordinance to preserve existing uses while the comprehensive zoning plan is being prepared. Such ordinance may be enacted as is an ordinary ordinance but shall be effective for no longer than two years after its enactment." This express authority, however, is apparently only available when the local government is adopting a *comprehensive* zoning ordinance. What does this mean for the Town of Pleasant Oaks and other communities in Wisconsin? If the community is seeking to enact a moratorium before a comprehensive zoning ordinance is established, it has express statutory authority to adopt a moratorium, but it seeks to enact a moratorium after it has developed a comprehensive zoning plan, then this statute doesn't directly apply. Can the municipality use this statutory authority anyway? Perhaps the local government could rely on implied authority if express authority does not exist. For example, Wisconsin has given to local governments a general subdivision approval authority, Wis. Stats. Sec. 236.45. Can this general authority offer implied support for what the Town of Pleasant Oaks seeks to do? Are there any cases in Wisconsin or other states that may aid them in deciding whether express or implied authority exists to aid this local government in its endeavors? For example, see *Lake Bluff Housing Part. v South Milwaukee*, 1997 Wis 2d 157, 540 NW 2d 189 (1995). How would other states handle this situation?

3. Given that the sewer plant is at or near capacity, is there sufficient cause and legal basis to deny "any new development resulting in additional load to an already overloaded sewer?" Is it mandatory or reasonable that a community exceed the capacity of its infrastructure if the development may endanger the health and welfare of its citizens?

Interestingly, the law in Wisconsin is obviously unsettled on whether or not authority exists for the Town of Pleasant Oaks, or other communities, to enact a moratorium ordinance in this case. Perhaps, the local government's reasons for enacting the ordinance, as set out in

the facts of this case, might be persuasive should this matter be brought to the attention of the courts. Obviously, the Town would want to consider their planning needs, anticipate possible threats to public health or safety, consider the consequences of development if the moratorium weren't enacted, determine the shortage of or the overburdening of public facilities as a result of development, provide for adequate public notice and hearings on the ordinance, and limit the scope and duration of the ordinance as much as possible.

The issues presented here are universal in nature. With some modifications, this case can be used to provide insight and instruction on the law to students in Real Estate/Business Law in any jurisdiction.

MUTUAL FUNDS' BEFORE- AND AFTER-TAX RETURNS: THE CASE OF TAX CLIENTELE

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CASE DESCRIPTION

The primary subject matter of this case concerns the taxation of mutual funds. Secondary issues examined include the concept of tax clientele, basic differences in the taxation of capital gains and ordinary income, basic differences in the tax consequences of holding mutual funds versus individual stock portfolios, and the characteristics of tax-efficient mutual funds. The case has a difficulty level of four, most appropriate for senior level students. It could also be used at the advanced junior level or beginning graduate level. The case is designed to be taught in one class period (approximately 75 minutes) and is expected to require 3-5 hours of outside preparation by students depending upon whether the advanced requirements are assigned.

CASE SYNOPSIS

This case introduces students to the tax issues related to a major player in the investment and retirement savings market—mutual funds. It also emphasizes the importance of considering after-tax rates of return in the investment decision. The case examines the interplay between tax rules and mutual fund rates of return by comparing pre- and post-tax rates of return for eleven common mutual funds over a two-year period, 1999 - 2000, which includes both bull and bear markets. The concept of tax clientele is introduced, for without a specific clientele, meaningful after-tax rates of return cannot be computed. Furthermore, basic differences in the taxation of capital gains and ordinary income as well as basic differences in the tax consequences of holding funds versus individual stock portfolios are examined. After completing this case students should be able to (1) calculate pre- and post-tax mutual fund returns; (2) rank funds based on a tax client's tax rates and after-tax returns; (3) understand the long-term effect of taxes on mutual funds returns; (4) develop strategies to maximize the investor's after-tax return; and (5) identify characteristics of tax-efficient funds.

The case is appropriate for assignment in undergraduate accounting and finance classes as well as for an exercise in graduate classes studying tax strategy. Several possible teaching approaches can be used to present this case and to extend the basic requirements. In its simplest form, by covering just the basic requirements, the case is an introduction to mutual fund taxation and mutual funds in general. It also serves as an exercise to enhance spreadsheet skills. In a more advanced setting, the basic requirements in the case can be used to motivate class discussion of the conceptual issues related to tax clientele and the importance of comparing after-tax returns in investment choice.

INSTRUCTORS' NOTES

The purpose of the case is twofold. First, it introduces students to the tax issues related to a major player in the investment and retirement savings market, mutual funds. Second, it emphasizes the importance of considering after-tax rates of return in the investment decision. The SEC has recognized the importance of this second objective and has recently required that mutual fund prospectuses report the impact of taxes and sale charges on fund returns. Prior to these new rules, most funds reported their performance results without taking taxes into account. Unfortunately, these new disclosures will generally appear only in the fund prospectus. The new disclosures are not required to appear in advertising unless the fund is presented as a tax-efficient fund. Additionally, the new disclosures can be confusing since the new rules require that the fund prospectus include not one, but two standardized measures of after-tax performance. The new measures also assume that gains are taxed at maximum federal rates. (Wall Street Journal, April 12, 2002, C1).

Even with this disclosure requirement, accounting students (or financial advisers) need to know how to calculate a fund's after-tax rate of return for the following reasons: (1) many investors are unlikely to carefully read a fund prospectus, (2) not all taxpayers are at the top marginal tax rates which the new disclosures assume, and (3) not all investors have the same goals or objectives. Thus, advisers need to be able to help prospective clients whatever their financial goals may be.

The case is appropriate for assignment in undergraduate accounting and finance classes as well as for an exercise in graduate classes studying tax strategy. Several possible teaching approaches can be used to present this case and to extend the basic requirements. In its simplest form, by covering just the basic requirements, the case is an introduction to mutual fund taxation and mutual funds in general. It also serves as an exercise to enhance spreadsheet skills. In a more advanced setting, the basic requirements in the case can be used to motivate class discussion of the conceptual issues related to tax clientele and the importance of comparing after-tax returns in investment choice. Instructors may wish to assign the relevant chapters of texts such as Scholes et. al. (2002) or Stern (2002) as background reading. Used in this way, the students are asked to conduct

the basic analysis prior to the class session. The instructor can then lead a one class period discussion of the case, including a detailed discussion of tax clientele and after-tax returns. With the more advanced readings noted above, discussion could include non-tax costs, risk, and other fees and expenses. Especially in the graduate setting, consideration should be given to more thorough study of non-tax issues such as risk, loads, 12b-1 fees, administration expenses, fund portfolio composition, and liquidation strategies for mutual fund shares. Good sources to assign students for additional reading on these and other case related issues include the following: Chitwood (1998), Franecki (1998), Fried (1998), and Nave (1993).

An alternative approach for covering the material in the case employs "Team Learning" techniques (Johnson et al. 1991 and Warfield 1997). If small groups are already being employed within the course, the case materials can be used effectively as a "mini-test" in which students are graded individually and in groups on case requirements. On an individual basis and prior to class, students can be assigned the basic requirements. During the class period, groups of 4-5 students can be formed and assigned additional (advanced) case requirements to work through during the class period. A lively discussion should ensue as student groups present and are asked to defend their solutions. The instructor can help guide the discussion and introduce the more advanced concepts as the discussion unfolds.

STUDENT REQUIREMENTS

Basic requirements

1. From the data in Exhibit 1, calculate and rank the 1999 and 2000 pre-tax returns for each fund. The return is calculated by dividing the total investment return, which includes change in net asset value (NAV), dividends, and gains distributed to shareholders, by the NAV of the fund at the beginning of the stated fiscal year. Consider preparing a spreadsheet for this purpose. For computations, assume all dividends are paid in cash at year-end.

The calculation of pre-tax returns appears in Exhibit 2. It should be noted to the students that the assumption of all dividends being paid at year-end is a simplifying one. To be technically correct, dividends received at times other than year-end should be treated as immediately reinvested and compounded at the fund's rate of return. Exact dates of dividend distributions can be found in publications such as the *Mergent Dividend Record*.

A more advanced class could be asked to recompute selected returns on both a before- and after-tax basis (requirement 3 below) by identifying the exact date of dividend receipt and reinvesting the dividends on that date, thereby compounding them at the fund's rate of return from the dividend payment date forward. This computation requires gathering

dividend amounts and fund NAV data on dividend distribution dates. An assumption also needs to be made regarding the timing of tax payments. Support exists for taxing dividends at one of three points: (1) upon receipt, if the taxpayer is making tax payments through salary withholding; (2) on the due date of quarterly estimates, if the taxpayer is making estimated payments; and (3) at the end of the year, if the taxpayer's dividends are not a significant portion of income, or the taxpayer is otherwise protected from underpayment penalties.

2. Can total distributions be used to predict pre-tax rates of return? Perform a regression analysis for 1999 using total distributions as the independent variable and pre-tax rates of return as the dependent variable. Is there correlation between these variables? Are rankings based on pre-tax rates of return significantly different from your client's ranking based solely on distributions made?

The regression data are shown in Figure 1. The regression is significant ($p = .058$), but as a practical predictor of pre-tax returns, distributions are weak. This is shown by an adjusted $R^2 = .27$ and the residual plot.

3. For each of the years 1999 and 2000, calculate the current year after-tax return (on a pre-liquidation basis). This means that you assume your client holds and does not sell the fund shares at year-end. The taxpayer is taxed on all realized distributions, which are broken into ordinary income (dividend distributions and short-term capital gains), as well as long-term capital gains. Make your after-tax return calculations under the following two independent circumstances:

- **a. Assuming the client is in the 40% tax bracket for ordinary income.**
- **b. Assuming the fund is held in a Roth IRA or a tax-exempt pension fund. (Deposits to a Roth IRA are made with after-tax dollars. Returns from a Roth IRA are tax exempt (IRC§408A)).**
- **c. What are the implications of the above results for both fund managers and investors in circumstances (a) and (b) above?**

The purpose of question 3 is twofold. First, it teaches students how to compute after-tax returns. Second, it introduces the concept of tax clientele by asking students to compute after-tax returns for both the highest tax rate taxpayer and the tax exempt Roth IRA or pension fund. Students should note that taxes only make a difference in case (a), the taxable investor. Computation of rates of return for both cases appears in Exhibit 2.

The numerical results in this question suggest the formation of tax clientele for both fund managers and investors. All else equal, high tax funds should attract tax-exempt investors such as Roth IRA holders, pension plans, and tax-exempt organizations (universities, churches, etc.). Low tax funds should appeal more to fully taxable investors such as wealthy individuals. Fund managers should take note of their potential clientele in their promotional activities. For example, in 1999, a taxable investor in the MSDW Capital Growth B Fund saw 34.38 percent of the fund's return eroded by taxes, moving it down three ranks from seventh to tenth in pre- to post- tax return. On the other hand, the tax-exempt investor was unaffected. Numerous other examples such as this can be found in the data.

To enrich the case experience and reduce opportunity for collusion among students, the instructor might consider assigning different tax rates and/or different mutual funds to students. Assigning different tax rates not only reduces opportunity for students to copy answers from each other, but adds a flavor of tax policy to the assignment. This is very relevant in light of the latest tax law giving preferential treatment to dividends over wage and salary income. Assigning different mutual funds adds an additional level of complexity to the case, but if the funds are those of interest to the student, the increase in reality could be worthwhile.

4. Can pre-tax rates of return be used to predict after-tax rates of return? Perform a regression analysis for 1999 using pre-tax rates of return as the independent variable and after-tax rates of return as the dependent variable. Is there correlation between these variables?

The regression data are shown in Figure 2. The regression is highly significant and adjusted R^2 for the pre-and post-tax rates of return is .92 so there is high correlation between pre-and post-tax rates of return as the graph of the residuals also demonstrates.

5. For each fund year, using a 40% tax rate for ordinary income and a 20% tax rate for capital gains, calculate both the amount and the percentage of return lost to taxes. For example, assume that fund XYZ has a 24 percent pre-tax return. You calculate that the amount of the return lost to taxes is 3 percent, leaving an after-tax return of 21 percent. Of the total return, 3/24 or 12.5 percent of the return is lost to taxes.

Another way to look at the impact of taxes is to analyze what is lost to taxes, both in terms of the percentage of return lost to taxes and the amount of return lost to taxes. These calculations also appear in Exhibit 2. In performing the analysis, one must be mindful not to fall into the trap of rating the fund with the smallest loss to tax as the best fund. For example, the Vanguard Index 500 Fund has the least loss to taxes in the two years but the Fidelity Retirement Growth Fund has a larger loss to taxes, and a higher after-tax return than the Vanguard Index 500 Fund for these years. The objective is to maximize after-tax returns, not minimize taxes.

However, tax losses are helpful as indicators to understanding management's track record with respect to tax status, but not necessarily overall return. Note also that analyzing the amount of return lost to taxes, as opposed to the percentage of return lost to taxes is particularly helpful for bad years such as 2000 when the denominator return is so small that percentage change can be difficult to interpret. For example, to disclose that Fidelity Retirement Growth lost a return of 4.77% to taxes is much more meaningful than the disclosure that the fund lost 352% of its return to taxes. Likewise, stating that MSDW Capital Growth B lost a return of 4.28% to tax is more meaningful than the statement that the fund lost 820% of its return to taxes.

6. For each year, rank the funds in the following three ways: (1) by pre-tax return, (2) by after-tax return (using the calculations for a 40% tax rate for ordinary income and a 20% tax rate for capital gains), and (3) by return lost to taxes (also using the 40%/20% ordinary/capital gains tax rates). Comment on your rankings. Are rankings based on pre-tax rates of return significantly different from rankings based on after-tax rates of return?

Ultimately, it is the after-tax return that is the most important of the three rankings appearing in Exhibit 2. Comparing the before-tax and after-tax returns shows numerous ranking shifts, most of which are reversals of two funds with similar pre-tax returns. The inclusion of more funds with similar pre-tax returns would make these ranking changes even more striking. As noted above, for the tax-exempt investor, only the pre-tax rankings have meaning, since these funds all sell at NAV (therefore, no implicit tax effects are impounded in the price) and the tax-exempt investor, obviously, will never be impacted by the taxability of the distributions. Finally, as discussed in (5) above, ranking funds by return lost to tax without also considering after-tax returns is akin to the mistake of making minimizing taxes rather than maximizing after-tax return a primary planning goal.

All else equal except taxes, funds that do well minimizing taxes would be preferred over those that do not do well minimizing taxes. Therefore, analyzing return lost to tax is important. For example, MSDW Capital Growth B shares lost a return amount of 9.64 percent to taxes in 1999 (approximately three quarters of the stock market's long run average pre-tax yield). Over the 22 fund-years in Exhibit 2, 6 fund-years lost a return amount of greater than four percent to taxes. A tax savvy investor would need an explanation for such performance. On the other hand, however, numerous examples exist in this small sample that indicate the fallacy of only minimizing taxes. In fact, selecting the top five after-tax return funds in each year, 7 of the 10 fund-years have the amount of returns lost to taxes above three percent.

7. Using your data from part 6, group the mutual funds into pairs for each year based on their pre-tax rates of return. That is, take the mutual fund with the highest pre-tax rate of return and pair it with the mutual fund with the second highest pre-tax rate of return. Group the mutual fund with third highest pre-tax rate of return with the fund having the fourth highest pre-tax rate of return and so forth. Do not include the Vanguard Index 500 in the pairs. Now compare the pre-tax rate of return to the after-tax rate of return for each of these pairs. Comment on your findings.

Exhibit 3 shows the paired rankings. In half of the cases, there is a reversal or change in the rankings of the fund pairs. For example, in 1999, MSDW American Opportunities B (which had the highest pre-tax rate of return) was paired with Growth Fund of America (which had the second highest pre-tax rate of return). When after-tax rates of return were examined, these funds had reversed position; that is, Growth Fund of America had the highest after-tax rate of return while MSDW American Opportunities B had the second highest after-tax rate of return. The data again point out the importance of calculating after-tax rates of return for taxable investments rather than relying on pre-tax rates of returns for investment decisions.

Advanced requirements

8. Over a long period of time, efforts to minimize taxes can provide a handsome payoff. Consider a $100,000 investment and a 10-year decision horizon. What is the effect of taxes on this investment if it has a 10 percent pre-tax return and a 7 percent after-tax return? (Note that many of the mutual funds in Exhibit 1 (11 of 22 fund-years) lose more than a 3 percent per-year return to taxes.)

Over a 10-year horizon, a $100,000 investment yielding 10 percent will accumulate to $259,374, while the same principal yielding 7 percent will accumulate to $196,715, leaving a difference of $62,659. The formula for the accumulation is: $i(1+r)^n$ where i is the initial investment, r is the rate of return, and n is the time period. This is an example of the effect of a 30 percent annual tax rate on an investment. (At current ordinary income tax rates and capital gain tax rates, a combined rate of 30 percent is not unusual.) In discussion, one might think of how this difference in final accumulation (over 24 percent) might impact the well being of a retiree. A concrete example such as this helps solidify the importance of the impact of taxation on mutual fund returns.

9. Many investors prefer to invest individually in stocks because they can choose when to sell their shares based on their personal financial position and the current state of the market. Mutual fund investors, however, are subject to the decisions of the fund managers regarding the fund's sale and/or purchase of individual stocks. As a result, many funds have large unrealized stock appreciation in their portfolios. (This could be seen by an increase in NAV from the beginning to the end of the year. Note the change in NAV for the funds in Exhibit 1.) How might this unrealized appreciation impact the following clientele:

a. Old shareholders?
b. Future shareholders?
c. Portfolio managers?

Unrealized stock appreciation in fund holdings represents potential future tax liability for fund shareholders. Tax-sensitive shareholders, however, value a fund that is not constantly realizing its gain and passing the taxable distributions through to the shareholders. Consequently, existing shareholders (part a) would prefer a fund that holds the appreciation indefinitely so that the unrealized gains are never realized for tax purposes (unless the investor chooses to sell the fund shares). If the fund follows this strategy, a large unrealized gain "overhang" will develop in the fund's portfolio. Investors who have been in the fund since the overhang's inception would prefer that it never be reduced.

New shareholders (part b) will be looking for funds that do not have large unrealized gains "overhang." For example, if the fund realizes gains early in the year, it will be passed through to shareholders at the date of record (usually late in the year). Any shareholder on the date of record, regardless of whether they were owners of the fund when the overhangs were realized or recognized, will be subject to a taxable gain on the distribution. By targeting funds with few unrealized gains, the investor is limiting his/her potential tax exposure from reductions in the overhang.

Fund managers (part c) must strike a balance between distributing gains and keeping a reasonable overhang. For example, if fund managers wish to attract tax-conscious investors, they may attempt to keep the overhang as low as possible to appeal to these new investors. On the other hand, funds that continually distribute large gains to investors will develop reputations of being high-tax funds, which may discourage new tax-conscious investors. Often, the fund description and type will inform investors of the fund manager's strategy.

10. Recently, some mutual funds have advertised that they are managed in a way to minimize their investors' tax liabilities. What factors would you use to try to identify mutual funds that are more "tax-managed" than others?

Several factors can be used to identify a mutual fund's tax efficiency. Historical after-tax return data can be indicative of future returns; however, it is possible that a fund may change its strategy and distribute more gains than in previous years. One of the most common measures of tax-management is the turnover rate, which measures the fund's sales volume, or how many times the fund has turned over its portfolio. Turnover rate alone, however, may be misleading since a low turnover rate coupled with a high taxable distribution may result if stocks with large unrealized gains have been sold, such as Coke or Microsoft (Franecki 1998). Turnover rate may also be misleading if taxable gains are a result of dividend distributions or short-term capital gain taxed at ordinary income rates. Investors should investigate what types of capital gain and dividend distributions the funds distribute, rather than relying solely on the turnover rate (Fried 1998). Reading about the fund manager's strategy or the fund's objectives may indicate future fund behavior.

All else equal, investors should remain in funds that are closed to new investors. The managers of these funds may focus on minimizing gain distributions to existing shareholders since they have no motivation to attract new investors. New investors might look for funds with a low capital gain overhang, so as to limit the potential for large gain distributions.

Funds that have recently switched to new fund managers also may leave investors with large gains. New fund managers tend to re-design the fund portfolio by selling the old holdings and buying new ones to reflect their own strategies. This may lead to large gain realizations being distributed to shareholders without regard for the shareholder tax positions or a possible overhang strategy of the previous fund manager (Dreman 1998).

Fund investors should also be wary of "tax-managed" fund imposters. A bullish market coupled with new investors continually joining the imposter funds, thereby growing the asset base, allows them to spread the gain distributions over many new investors, diluting the tax

impact on old investors (Franecki 1998). Instead, investors should look for tax-managed funds that use tax-efficient strategies. Many of these funds buy and hold securities to create gain overhangs, buy securities paying little or no dividends, and attempt to offset losses with gains (Franecki 1998). Investors can often discover this strategy through reading the fund's prospectus and discussions of the fund's management strategy.

Finally, investors should look for naturally tax-managed funds. Growth stocks generally have much lower dividend yields (taxed as ordinary income until the 2003 Tax Act), and more capital appreciation (taxed as capital gain). Value stocks generally have a higher component of return from dividend income rather than capital gain (Siegel 1997). Index funds are naturally tax efficient. These funds rarely turnover their portfolio unless the underlying index undergoes a change. This results in infrequent change, large overhangs, and fewer gain distributions to shareholders (Chitwood 1998).

11. In 2000, the market dramatically fell impacting all mutual fund portfolios. How might mutual investors end up paying a huge tax bill while experiencing a decline in the NAV of their fund investment? Do you see any evidence of this in your calculation of 2000 before- and after-tax returns for the mutual funds in Exhibit 1? (HINT: How might investor redemptions caused by poor fund performance force a mutual fund to increase its taxable income and therefore pass larger dividends on to its remaining shareholders?)

This requirement begins with an understanding of the Investment Company Act of 1940, which requires (for tax exemption) a mutual fund to distribute at least 90% of its taxable income, net capital gains, and net tax-exempt income to shareholders by the time it files its federal income tax return. A mutual fund is thus allowed to pass through to investors the fund's income and capital gains without income tax at the fund level. Calendar year mutual funds must distribute by December 31 at least 98% of any tax-basis capital gains earned through October 31, and tax-basis ordinary income earned through December 31 to avoid a 4% excise tax (Nave 1993). These requirements provide the explanation for fund distributions of realized capital gains and dividends.

Mutual funds can be redeemed at any time, at their current NAV, through the same channels in which they are purchased. The mutual fund investor does not need to rely upon another investor to purchase his/her shares. Even if the fund is experiencing a bad year or a bear market, the fund is required to cash out their investors who choose to redeem their shares. If the fund does not have a sufficient cash base to redeem the shares, it must sell some of its holdings to generate enough cash to pay the redemptions. Consequently, the fund's market

price per share may decline, resulting in a decrease in return on investment for existing shareholders, while at the same time, the fund must sell its appreciated holdings which will result in realized taxable income. This realized taxable income, per the 1940 Act distribution requirements, must be distributed to existing shareholders resulting in a potential capital gains tax liability to them. For example, the Artisan Small Capital Fund finished its 1998 third quarter with a return of –23.3%, yet was forced to distribute capital gains equal to 9% of the fund's NAV (Damato 1998). Once its shareholders realized the fund was not performing well, some shareholders quickly redeemed their shares. This forced the fund to sell some of its holdings and distribute the gains to its existing shareholders.

One potential advantage of a market decline is selling funds that are not performing well, and incurring losses to offset capital gains for the year. Mutual funds can only offset losses on security sales with gains, but not pass excess losses on to shareholders. Thus, net capital losses (and the resulting decrease in NAV) can only be recognized when shareholders sell their shares. Shareholders should be wary when contemplating selling shares to recognize a capital loss, being certain the basis of their shares sold is higher than the current market price.

12. Obtain an article discussing the requirement for disclosures of mutual fund after-tax returns. One likely source for this information is the CCH Internet Tax Research Network, which is available at most university libraries. Comment on the strengths and weaknesses associated with this requirement.

This requirement is self explanatory. At a minimum, students should identify and discuss (1) the importance of requiring after-tax numbers and (2) the difficulty of getting the proper after-tax numbers for each unique client. Consideration might also be given to having the students compute after-tax return exactly as defined by the Securities and Exchange Commission.

CONCLUSIONS

This case examines the interplay between tax rules and investment returns in a current and increasingly popular setting, mutual funds. It exposes students to some of the nuances of mutual fund investing, comparing pre- and post-tax rates of return for common mutual funds for 1999 - 2000. The concept of tax clientele is introduced, for without a specific clientele, meaningful after-tax rates of return cannot be computed. Furthermore, basic differences in the taxation of capital gains and ordinary income as well as basic differences in the tax consequences of holding funds

versus individual stock portfolios are examined. Finally, the impact of non-tax costs on rates of return can be introduced. In short, the case allows students the opportunity to develop tax accounting and financial analysis tools and directly apply them to a relevant setting.

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EXHIBIT 1
Selected Mutual Funds

Fund Name	Qusip	Symbol	Net Asset Value 12/31/1998	Net Asset Value 12/31/99	1999 Distributions Ordinary	1999 Distributions Long	1999 Distributions Short	Total Distributions	Rank Order*
American Century 20th Growth	25083106	TWCGX	27.16	32.28	0.000	3.336	0.179	3.515	4
Fidelity Blue Chip Growth	316389105	FBGRX	50.39	60.11	0.140	1.900	0.170	2.210	7
Fidelity Large Capital Stock	315912402	FLCSX	16.98	21.57	0.040	0.230	0.200	0.470	11
Fidelity Retirement Growth	316145309	FDFFX	20.51	25.85	0.050	1.470	2.190	3.710	3
Growth Fund of America	399874106	AGTHX	22.40	29.14	0.045	3.195	0.000	3.240	5
MFS Large Capital Growth A	552985301	MCGAX	17.02	21.00	0.000	1.078	0.865	1.943	9
MSDW American Opportunities-B	616933206	AMOBX	32.85	42.63	0.000	0.940	4.706	5.646	1
MSDW Capital Growth B	616936209	CAPBX	15.13	14.94	0.000	1.572	2.862	4.434	2
Nation's Capital Growth Inv A	638579458	NCGIX	11.65	13.41	0.000	0.777	0.000	0.777	10
Northern Growth Equity	665162103	NOGEX	20.80	23.48	0.016	2.001	0.000	2.017	8
Vanguard Index 500	922908108	VFINX	113.95	128.52	1.410	0.920	0.075	2.405	6

			Net Asset Value 12/31/1999	Net Asset Value 12/31/00	2000 Distributions Ordinary	2000 Distributions Long	2000 Distributions Short	Total Distributions	Rank Order*
American Century 20th Growth			32.28	24.00	0.000	3.265	0.313	3.578	4
Fidelity Blue Chip Growth			60.11	51.53	0.000	2.270	0.250	2.520	7
Fidelity Large Capital Stock			21.57	17.75	0.010	0.610	0.180	0.800	11
Fidelity Retirement Growth			25.85	22.01	0.080	2.220	1.890	4.190	3
Growth Fund of America			29.14	27.08	0.145	4.095	0.000	4.240	2
MFS Large Capital Growth A			21.00	16.10	0.000	2.420	0.901	3.321	5
MSDW American Opportunities-B			42.63	32.94	0.000	2.437	2.905	5.342	1
MSDW Capital Growth B			14.94	13.25	0.000	0.026	1.586	1.612	9
Nation's Capital Growth Inv A			13.41	9.64	0.000	2.360	0.000	2.360	8
Northern Growth Equity			23.48	18.72	0.000	2.352	0.679	3.031	6
Vanguard Index 500			128.52	121.86	1.300	0.000	0.000	1.300	10

*Based on Total Distribution

EXHIBIT 2
Financial Results

1999 Distributions

Fund	Net Asset Value 12/31/98	Net Asset Value 12/31/99	Change in Net Asset Value	Ordinary	Long	Short	Before-Tax Return[1]	Rank	After-Tax Return[2]	Rank	Percent of Return Lost to Tax Percent[3]	Rank	Amount of Return Lost to Tax Amount[4]	Rank
American Century 20th Growth	27.16	32.28	5.12	0.000	3.336	0.179	0.3179	5	0.2907	5	8.56%	6	0.0272	6
Fidelity Blue Chip Growth	50.39	60.11	9.72	0.140	1.900	0.170	0.2368	8	0.2268	7	4.22%	10	0.0100	9
Fidelity Large Capital Stock	16.98	21.57	4.59	0.040	0.230	0.200	0.2980	6	0.2896	6	2.81%	11	0.0084	10
Fidelity Retirement Growth	20.51	25.85	5.34	0.050	1.470	2.190	0.4412	3	0.3832	3	13.15%	3	0.0580	3
Growth Fund of America	22.40	29.14	6.74	0.045	3.195	0.000	0.4455	2	0.4162	1	6.58%	7	0.0293	5
MFS Large Capital Growth A	17.02	21.00	3.98	0.000	1.078	0.865	0.3480	4	0.3150	4	9.48%	4	0.0330	4
MSDW American Opportunities-B	32.85	42.63	9.78	0.000	0.940	4.706	0.4696	1	0.4066	2	13.42%	2	0.0630	2
MSDW Capital Growth B	15.13	14.94	-0.19	0.000	1.572	2.862	0.2805	7	0.1841	10	34.38%	1	0.0964	1
Nation's Capital Growth Inv A	11.65	13.41	1.76	0.000	0.777	0.000	0.2178	10	0.2044	9	6.13%	8	0.0133	8
Northern Growth Equity	20.80	23.48	2.68	0.016	2.001	0.000	0.2258	9	0.2063	8	8.66%	5	0.0195	7
Vanguard Index 500	113.95	128.52	14.57	1.410	0.920	0.075	0.1490	11	0.1421	11	4.58%	9	0.0068	11

2000 Distributions

Fund	Net Asset Value 12/31/99	Net Asset Value 12/31/00	Change in Net Asset Value	Ordinary	Long	Short	Before-Tax Return	Rank	After-Tax Return	Rank	Percent of Return Lost to Tax Return	Rank	Amount of Return Lost to Tax Amount	Rank
American Century 20th Growth	32.28	24.00	-8.28	0.000	3.265	0.313	-0.1457	11	-0.1698	11	16.55%	8	0.0241	8
Fidelity Blue Chip Growth	60.11	51.53	-8.58	0.000	2.270	0.250	-0.1008	7	-0.1100	6	9.14%	10	0.0092	9
Fidelity Large Capital Stock	21.57	17.75	-3.82	0.010	0.610	0.180	-0.1400	10	-0.1492	10	6.56%	11	0.0092	10
Fidelity Retirement Growth	25.85	22.01	-3.84	0.080	2.220	1.890	0.0135	2	-0.0341	2	352.00%	2	0.0477	1
Growth Fund of America	29.14	27.08	-2.06	0.145	4.095	0.000	0.0748	1	0.0447	1	40.23%	5	0.0301	7
MFS Large Capital Growth A	21.00	16.10	-4.90	0.000	2.420	0.901	-0.0752	6	-0.1154	7	53.48%	3	0.0402	3
MSDW American Opportunities-B	42.63	32.94	-9.69	0.000	2.437	2.905	-0.1020	8	-0.1407	9	37.93%	6	0.0387	4
MSDW Capital Growth B	14.94	13.25	-1.69	0.000	0.026	1.586	-0.0052	3	-0.0480	4	820.00%	1	0.0428	2
Nation's Capital Growth Inv A	13.41	9.64	-3.77	0.000	2.360	0.000	-0.1051	9	-0.1403	8	33.48%	7	0.0352	5
Northern Growth Equity	23.48	18.72	-4.76	0.000	2.352	0.679	-0.0736	5	-0.1052	5	42.91%	4	0.0316	6
Vanguard Index 500	128.52	121.86	-6.66	1.300	0.000	0.000	-0.0417	4	-0.0458	3	9.70%	9	0.0040	11

Note: Amounts computed as follows:

1. (Change in net asset value + ordinary + long + short) / beginning net asset value
2. (Change in net asset value + ((ordinary + short) x (1 - 40%)) + Long x (1 - 20%)) / beginning net asset value
3. (Before tax return - after-tax return) / before-tax rate of return
4. Before tax return - after-tax return

EXHIBIT 3
Financial Results--Paired Funds

1999 Distributions

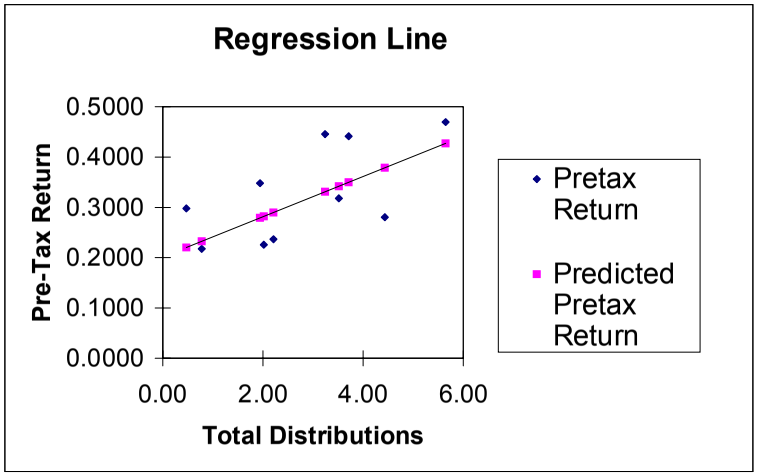
Fund	Net Asset Value 12/31/98	Net Asset Value 12/31/99	Change in Net Asset Value	Ordinary	Long	Short	Before-Tax Return	Before-Tax Rank	After-Tax Return	After-Tax Rank	Percent of Return Lost to Taxes Percent	Percent of Return Lost to Taxes Rank	Amount of Return Lost to Taxes Amount	Amount of Return Lost to Taxes Rank
MSDW American Opportunities-B	32.85	42.63	9.78	0.000	0.940	4.706	0.4696	1	0.4066	2	13.42%	2	0.0630	2
Growth Fund of America	22.40	29.14	6.74	0.045	3.195	0.000	0.4455	2	0.4162	1	6.58%	7	0.0293	5
Fidelity Retirement Growth	20.51	25.85	5.34	0.050	1.470	2.190	0.4412	3	0.3832	3	13.15%	3	0.0580	3
MFS Large Capital Growth A	17.02	21.00	3.98	0.000	1.078	0.865	0.3480	4	0.3150	4	9.48%	4	0.0330	4
American Century 20th Growth	27.16	32.28	5.12	0.000	3.336	0.179	0.3179	5	0.2907	5	8.56%	6	0.0272	6
Fidelity Large Capital Stock	16.98	21.57	4.59	0.040	0.230	0.200	0.2980	6	0.2896	6	2.81%	10	0.0084	10
MSDW Capital Growth B	15.13	14.94	-0.19	0.000	1.572	2.862	0.2805	7	0.1841	10	34.38%	1	0.0964	1
Fidelity Blue Chip Growth	50.39	60.11	9.72	0.140	1.900	0.170	0.2368	8	0.2268	7	4.22%	9	0.0100	9
Northern Growth Equity	20.80	23.48	2.68	0.016	2.001	0.000	0.2258	9	0.2063	8	8.66%	5	0.0195	7
Nation's Capital Growth Inv A	11.65	13.41	1.76	0.000	0.777	0.000	0.2178	10	0.2044	9	6.13%	8	0.0133	8

2000 Distributions

Fund	Net Asset Value 12/31/99	Net Asset Value 12/31/00	Change in Net Asset Value	Ordinary	Long	Short	Before-Tax Return	Before-Tax Rank	After-Tax Return	After-Tax Rank	Percent of Return Lost to Taxes Percent	Percent of Return Lost to Taxes Rank	Amount of Return Lost to Taxes Amount	Amount of Return Lost to Taxes Rank
Growth Fund of America	29.14	27.08	-2.06	0.145	4.095	0.000	0.0748	1	0.0447	1	40.23%	5	0.0301	7
Fidelity Retirement Growth	25.85	22.01	-3.84	0.080	2.220	1.890	0.0135	2	-0.0341	2	352.00%	2	0.0477	1
MSDW Capital Growth B	14.94	13.25	-1.69	0.000	0.026	1.586	-0.0052	3	-0.0480	3	820.00%	1	0.0428	2
Northern Growth Equity	23.48	18.72	-4.76	0.000	2.352	0.679	-0.0736	4	-0.1052	4	42.91%	4	0.0316	6
MFS Large Capital Growth A	21.00	16.10	-4.90	0.000	2.420	0.901	-0.0752	5	-0.1154	6	53.48%	3	0.0402	3
Fidelity Blue Chip Growth	60.11	51.53	-8.58	0.000	2.270	0.250	-0.1008	6	-0.1100	5	9.14%	9	0.0092	9
MSDW American Opportunities-B	42.63	32.94	-9.69	0.000	2.437	2.905	-0.1020	7	-0.1407	8	37.93%	6	0.0387	4
Nation's Capital Growth Inv A	13.41	9.64	-3.77	0.000	2.360	0.000	-0.1051	8	-0.1403	7	33.48%	7	0.0352	5
Fidelity Large Capital Stock	21.57	17.75	-3.82	0.010	0.610	0.180	-0.1400	9	-0.1492	9	6.56%	10	0.0092	10
American Century 20th Growth	32.28	24.00	-8.28	0.000	3.265	0.313	-0.1457	10	-0.1698	10	16.55%	8	0.0241	8

FIGURE 1
Total Distributions Vs. Pre-Tax Return

	1999 Data	
	Distributions	**Pretax Return**
American Century 20th Growth	3.515	0.3179
Fidelity Blue Chip Growth	2.210	0.2368
Fidelty Large Capital Stock	0.470	0.2980
Fidelity Retirement Growth	3.710	0.4412
Growth Fund of America	3.240	0.4455
MFS Large Capital Growth A	1.943	0.3480
MSDW American Opportunities B	5.646	0.4696
MSDW Capital Growth B	4.434	0.2805
Nation's Capital Growth Inv A	0.777	0.2178
Northern Growth Equity	2.017	0.2258



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.585393879
R Square	0.342685993
Adjusted R Square	0.269651104
Standard Error	0.089810224
Observations	11

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.037845786	0.037846	4.692086	0.058481612
Residual	9	0.072592887	0.008066		
Total	10	0.110438673			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.201414801	0.057719204	3.489563	0.006835	0.070844791	0.331984812	0.070844791	0.331984812
Distributions	0.039995749	0.018464215	2.166122	0.058482	-0.001773239	0.081764737	-0.001773239	0.081764737

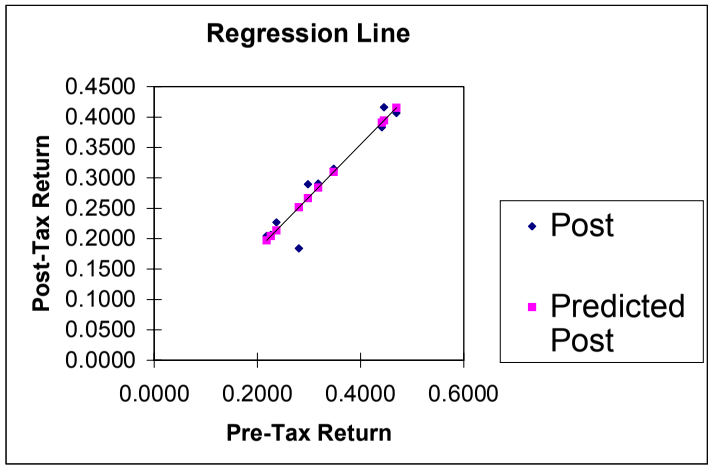
RESIDUAL OUTPUT

Observation	*›dicted Pretax Ret*	*Residuals*
1	0.34199986	-0.02406908
2	0.289805407	-0.053052083
3	0.220212803	0.077784841
4	0.349799031	0.09144914
5	0.331001029	0.114534685
6	0.279126542	0.068875808
7	0.427230802	0.042358239
8	0.378755954	-0.09825364
9	0.232491498	-0.014723258
10	0.282086228	-0.05626892
11	0.297604578	-0.148635732

Note: Regression graph and output computed with Microsoft Excel

FIGURE 2
Pre-Tax Return Vs. Post-Tax Return

	1999 Data	
	Pre-tax	Post-tax
American Century 20th Growth	0.3179	0.2907
Fidelity Blue Chip Growth	0.2368	0.2268
Fidelty Large Capital Stock	0.2980	0.2896
Fidelity Retirement Growth	0.4412	0.3832
Growth Fund of America	0.4455	0.4162
MFS Large Capital Growth A	0.3480	0.3150
MSDW American Opportunities B	0.4696	0.4066
MSDW Capital Growth B	0.2805	0.1841
Nation's Capital Growth Inv A	0.2178	0.2044
Northern Growth Equity	0.2258	0.2063



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.96560789
R Square	0.9323986
Adjusted R Square	0.92488733
Standard Error	0.02583093
Observations	11

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.082826353	0.082826	124.1333	1.44529E-06
Residual	9	0.006005133	0.000667		
Total	10	0.088831486			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.00859065	0.025458487	0.337437	0.743524	-0.049000497	0.066181788	-0.049000497	0.066181788
Pre	0.86601154	0.077728354	11.14151	1.45E-06	0.690177653	1.041845426	0.690177653	1.041845426

RESIDUAL OUTPUT

Observation	*Predicted Posi*	*Residuals*
1	0.28392237	0.006806643
2	0.21362176	0.013129583
3	0.26666004	0.02297482
4	0.39071665	-0.00748896
5	0.39442972	0.021775642
6	0.3099647	0.005041179
7	0.41526017	-0.008697008
8	0.25150889	-0.067450723
9	0.19718045	0.00724873
10	0.20415104	0.002118191
11	0.13759939	0.004541905

Note: Regression graph and output computed with Microsoft Excel