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EDUCATORS' FORUM

Using Technology to Examine the Entity-Choice Decision

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ABSTRACT

The *AICPA Model Tax Curriculum* (AICPA 1996a) stresses the importance of entity taxation throughout the first two undergraduate tax courses and a master's of accounting program. This paper provides instructors with a case that uses a simplified example of the Boston Celtics, a publicly traded partnership, to highlight the tax and nontax considerations that must be evaluated when making a choice of entity decision. The case also incorporates technological tools including CD-ROM or Internet-based tax research, Excel spreadsheets for preparing tax and cash flow projections, word-processing software, and an optional PowerPoint presentation. The case is designed to be completed in stages throughout the semester.

Data Availability: The spreadsheet workbook is available by request from the first author.

INTRODUCTION

The *AICPA Model Tax Curriculum* (AICPA 1996a) stresses the importance of entity taxation throughout the first two undergraduate tax courses and a master's of accounting program. The suggested program content for the second undergraduate tax course and the master's of accounting program focuses on the various tax entities (C corporation, S corporation, and partnership), concluding with a comparison of the entities and the choice-of-entity decision. Typically, the choice-of-entity decision is addressed from the perspective of a start-up company making the initial decision regarding the form of business entity. However, the appropriate tax entity may change over the life of the firm due to either changes in the business or changes in tax law. A perfect example of the impact of changes in tax law on the choice of business entity involves publicly traded partnerships (PTPs).

For tax years beginning in 1998, "grandfathered" PTPs were required to make a decision regarding the type of entity that the PTP would be treated as for tax purposes in the future. This case uses a simplified example of the Boston Celtics—a PTP as of June 30, 1998—to highlight the tax and nontax considerations that must be evaluated when making a choice-of-entity decision. The case is designed to be completed in stages throughout the semester and is suitable for an

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undergraduate tax class that emphasizes entities, a graduate tax class, or an accounting information systems class where students have a sufficient background in tax. This case incorporates many of the technology skills employers expect (including tax and cash flow projections using a spreadsheet program and electronic tax research) to address a choice-of-entity decision for a PTP.

The purpose of this paper is to provide tax educators with an instructional case that focuses on the learning objectives associated with the choice of business entity, and that also emphasizes the development of nontechnical competencies identified by the AICPA's CPA Vision Project. The next section reviews the learning objectives associated with the choice of business entity and how the case study addresses these objectives. This is followed by a discussion of the nontechnical competencies developed in the case study. The remainder of the paper focuses on the case study. The case study begins with background information necessary for students to understand why the Boston Celtics PTP was required to revisit its choice-of-entity decision and to identify nontax factors that would affect the decision. The background information refers to Tables 1 through 4, which include the financial data and assumptions necessary for preparing the tax and cash flow analysis. The case requirements follow the background information. The next section consists of teaching notes, including a discussion of the basics of good spreadsheet design, and the final section provides the case solution. Appendix A presents a spreadsheet solution to Requirement 3, the projected after-tax net income and cash flow for the entity. Appendix B includes a spreadsheet solution to Requirement 4, the projected after-tax net income, and cash flow for the individual investor. Appendix C provides a brief description of the Boston Celtics' actual entity decision, and Appendix D discusses two spreadsheet design components in greater detail.

Choice-of-Entity Learning Objectives

The *AICPA Model Tax Curriculum* (AICPA 1996a) (hereafter *Model Tax Curriculum*) calls for less emphasis on individual taxation in a single undergraduate tax course and recommends adding coverage of corporations, partnerships, and S corporations. For an advanced tax course at either the undergraduate or master's level, the suggested course content includes more extensive coverage of each business entity as well as a segment on choice of entity. The entity emphasis is reflected by the objectives for both courses. One of the *Model Tax Curriculum*'s objectives for a single undergraduate tax course is "to introduce students to a broad range of tax concepts and types of taxpayers." One of the objectives for the advanced tax course is "to expand knowledge base as to choice of entity."

Many tax textbooks have responded to the change in emphasis recommended by the Model Tax Curriculum Task Force. A number of popular textbooks (Murphy and Higgins 1999; Jones 1999; Smith et al. 1999) include a chapter on comparative forms of doing business or the choice-of-entity decision. The learning objectives associated with the choice of business entity generally include: (1) understanding the nontax characteristics that affect the choice-of-entity decision; (2) identifying and comparing the income tax characteristics of the various entities, including the incidence of taxation, double taxation, and the status of an owner as an employee; (3) understanding the consequences of formation and disposition of a business for both the owners and the entity; and (4) understanding how the income tax characteristics affect the choice-of-entity decision.

The Boston Celtics case study incorporates all aspects of these four objectives except for the status of an owner as an employee. Requirements 1 and 2 focus on identifying the tax and nontax characteristics that affect the choice of entity decision. Students must then apply the different entity rules to the fact pattern to complete the tax and cash flow projections. Applying the tax law requires that students understand the law and its impact rather than just memorizing the rules. The Boston Celtics case provides a "real-world" application that will help solidify the learning objectives of the choice-of-entity portion of the tax course.

Development of Nontechnical Competencies

In 1997, the AICPA undertook the CPA Vision Project (AICPA 1998) to identify the competencies that CPAs need to be successful. This case emphasizes four of the five core competencies

identified in the AICPA's CPA Vision Project. These core competencies include communication and leadership skills, strategic- and critical-thinking skills, the ability to interpret converging information, and technological adeptness.

Communication skills are emphasized through preparation of a written research memorandum and an oral client presentation. Leadership and teamwork are fostered by working in a group setting. The CPA Vision core competencies also include strategic- and critical-thinking skills and the interpretation of converging information. Critical-thinking skills are defined as the ability "to link data, knowledge, and insight to provide quality advice for strategic decision-making" (AICPA 1998, 17). Interpretation of converging information is defined as the ability "to interpret and provide a broader context using financial and non-financial information" (AICPA 1998, 18). The case develops these competencies by requiring students to consider both tax and nontax issues and to recommend a choice of entity when there is no "correct" answer. The significant nontax considerations in this case force students to consider recommending a choice of entity that does not provide the optimum tax result. This type of strategic thinking is difficult for tax students who typically prefer to recommend the solution with the best tax answer.

Finally, the case incorporates several technological tools. While many tax courses limit technology use to tax research and tax return preparation, this case extends the technology coverage to include projections involving a spreadsheet program and a PowerPoint presentation. The AICPA recently published a document defining information technology competencies for the accounting profession and providing guidelines for integrating information technology into the accounting curriculum (AICPA 1996b). The document emphasizes that "students must be made aware that IT personal-productivity skills are essential for today's professional. These include proficiency in using tools such as spreadsheets, word processors, presentation graphics, databases, etc., to enhance personal efficiency and effectiveness" (AICPA 1996b, 8). This case study allows students to improve the technology skills that are essential for success in today's accounting profession.

THE BOSTON CELTICS CASE STUDY

Background

As of January 1, 1998, the Boston Celtics professional basketball team was owned by Boston Celtics Limited Partnership (BCLP), a PTP traded on the New York and Boston Stock Exchanges. A PTP is a limited partnership registered with the Securities and Exchange Commission and traded on a national stock exchange or over the counter. PTPs became popular in the early 1980s when the maximum individual tax rates were reduced from 70 percent to 50 percent. The BCLP partnership interests (units) originally sold on December 11, 1986 for $17.50 each. Prior to 1987, PTPs were treated just like any other limited partnership for federal tax purposes. Therefore, BCLP filed a partnership tax return (Form 1065) and sent each partner (unitholder) a Form K-1 indicating the partner's share of partnership income that must be reported on the partner's tax return.

Due to the popularity of PTPs and the Treasury Department's concern that U.S. corporations might reorganize to change from the corporate form to PTPs (thereby significantly reducing corporate tax revenue), the Omnibus Budget Reconciliation Act of 1987 (OBRA 87) included a provision requiring PTPs to be treated as corporations for federal tax purposes. However, OBRA 87 included a grandfather clause that applied to PTPs existing on December 17, 1987. Under this clause, existing PTPs continued to be treated as partnerships for federal tax purposes for ten years. Since BCLP was "grandfathered" under OBRA 87, it continued to file partnership tax returns through the tax year ended June 30, 1998 (BCLP uses a June 30 year-end due to the natural business cycle of a professional basketball team).

As the end of the ten-year grandfather period approached, the requirement to subject grandfathered PTPs to the corporate income tax was revisited by Congress. Congress enacted provisions under the Taxpayer Relief Act of 1997 (TRA97) that allowed grandfathered PTPs to continue as partnerships as long as they elected to be subject to a gross income tax. The gross income tax is intended to approximate the corporate tax a PTP would pay if it were treated as a corporation for federal tax purposes.

BCLP is seeking your advice regarding its choice-of-entity decision and the resulting tax treatment of the PTP after the end of the grandfather period. BCLP's last tax year under the grandfather clause is the year ended June 30, 1998. The Vice President of Finance (V.P. Finance) is concerned about the impact of paying Federal taxes on the net cash flow of the entity. A reduction in the net cash flow of the entity will reduce the cash available for distribution to the investors. When the partnership units were sold to the public in 1986, the prospectus indicated that the partnership intended to make annual distributions ("dividends") starting at $1.40 per unit in the first year and increasing to $1.60 per unit in the second year. A majority of the investors are individuals, many of whom purchased the units because of this "guaranteed" dividend yield. The partnership has made cash distributions every year, although not always equal to the $1.60 per unit indicated in the initial prospectus. Table 1 provides financial statement per unit net income (actual), taxable income (estimated) and cash distributions (actual) from inception.[1]

The V.P. Finance is aware that both tax and nontax factors must be considered in BCLP's choice-of-entity decision. He has asked you to take a broad view of all the factors in making your recommendation. Both historical and prospective financial information are provided for your analysis. Table 2 includes historical (four years) earnings information. Table 3 provides balance sheet

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[1] The per-unit financial statement net income and cash distributions are actual amounts obtained from Forms 10-K filed with the Securities and Exchange Commission. The per-unit taxable income amounts are estimated based on a discussion with the Vice President of Finance for BCLP. The actual taxable income numbers are not considered public information.

TABLE 1
PER-UNIT FINANCIAL STATEMENT NET INCOME, ESTIMATED TAXABLE INCOME, AND CASH DISTRIBUTION

Year Ended June 30	Financial Statement Net Income ($ Per Unit)	Estimated Taxable Income ($ Per Unit)	Cash Distribution ($ per Unit)
1987	1.00	0.00	0.70
1988	1.59	1.00	1.60
1989	1.88	1.10	1.60
1990	1.23	0.80	1.35
1991	0.32	0.10	1.40
1992	0.18	0.05	2.25
1993	0.08	0.05	1.25
1994	3.61	2.00	1.25
1995	2.43	1.60	3.00
1996	8.89	1.60	1.50
1997	0.06	0.05	1.00
1998	2.17	1.20	2.00

The per-unit financial statement net income and cash distributions are actual amounts obtained from Forms 10-K filed with the Securities and Exchange Commission. The per-unit taxable income amounts are estimated based on discussions with the Vice President of Finance for BCLP. The actual taxable income numbers are not public information. Differences between financial statement net income and taxable income are mainly attributable to different depreciation methods and the timing of the tax deduction for deferred compensation.

TABLE 2
BOSTON CELTICS LIMITED PARTNERSHIP
HISTORICAL STATEMENT OF INCOME
(in thousands)

| | Year Ended June 30 | | | |
	1998	1997	1996	1995
Revenues:				
Ticket sales	39,108	31,813	35,249	22,037
Television, cable, and radio	28,002	23,269	22,072	20,956
Other	8,569	7,916	7,459	7,419
Playoffs				1,913
Total Revenues	75,679	62,998	64,780	52,325
Costs and Expenses:				
Team expenses[a]	40,402	40,941	27,891	31,204
Game expenses	2,820	2,386	2,606	2,881
Playoffs				697
General and administrative	13,465	13,914	15,053	14,086
Selling and promotional	4,819	4,680	2,973	2,692
Depreciation	208	189	142	85
Amortization of NBA franchise	165	165	165	165
Total Costs and Expenses	61,879	62,275	48,830	51,810
Net Operating Income	13,800	723	15,950	515
Interest expense	(6,018)	(5,872)	(6,387)	(9,074)
Interest income	6,402	6,609	8,175	6,507
Revenue from league expansion				7,114
Gains (losses) on securities	(18)	360	(101)	110
Income before taxes	14,166	1,820	17,637	5,172
Provision for taxes[b]	1,900	1,400	1,851	(345)
Income from cont. operations	12,266	420	15,786	5,517
Discontinued operations	0	0	38,414	10,639
Net Income	12,266	420	54,200	16,156

The Historical Statement of Income was obtained from Form 424B3, Prospectus Filed Pursuant to Rule 424, filed with the Securities and Exchange Commission on June 9, 1998.
The Historical Statement of Income of BCLP includes the accounts of BCLP and its majority-owned and controlled subsidiaries. Two wholly owned subsidiary corporations of BCLP are subject to income taxes and, therefore, report an income tax provision and deferred income taxes in accordance with Financial Accounting Standards Board Statement No. 109.
[a]Team expenses include the accrued expense for deferred compensation.
[b]The above provision for income taxes represents the income tax provision for the two consolidated subsidiary corporations owned by BCLP. The corporate tax on such subsidiaries is ignored for purposes of this case study.

information for the years ended June 30, 1998 and 1997. Table 4 outlines a list of assumptions for projecting five years of future earnings.

Case Requirements

1. Using a CD-ROM service, web-based service, or free tax sites available on the Internet, determine the tax options available to BCLP for the year ending June 30, 1999. Identify the potential tax issues for each of the options for both the partnership and the individual

TABLE 3
BOSTON CELTICS LIMITED PARTNERSHIP
CONSOLIDATED BALANCE SHEETS AT JUNE 30, 1998 AND 1997

	June 30, 1998	June 30, 1997
Assets		
Current assets:		
Cash and cash equivalents	8,268	6,499
Marketable securities	1,041	42,572
Other short-term investments	81,114	49,671
Accounts receivable		2,667
Prepaid income taxes[a]		432
Prepaid expenses	213	1,856
Other current assets		102
Total current assets	**90,636**	**103,801**
Property and equipment, net	24	909
NBA Franchise, net		4,010
Other intangible assets, net		903
Other assets	1,096	9,575
Total Assets	**91,756**	**119,200**
Liabilities and Partners' Capital (Deficit)		
Current liabilities:		
Accounts payable and accrued expenses	1,102	12,878
Deferred game revenues	3,036	5,585
Notes payable	17,539	18,910
Other current liabilities	734	1,767
Total current liabilities	**22,411**	**39,139**
Deferred taxes[a]	9,711	20,100
Notes payable	62,984	47,500
Other noncurrent liabilities[a]	29,865	20,250
Partners' capital (deficit)	(33,215)	(7,790)
Total Liabilities and Partners' Capital (Deficit)	**91,756**	**119,200**

The Consolidated Balance Sheets of BCLP were obtained from Form 424B3, Prospectus Filed Pursuant to Rule 424, filed with the Securities and Exchange Commission on June 9, 1998.

The Consolidated Balance Sheets of BCLP include the accounts of BCLP and its majority-owned and controlled subsidiaries. Two wholly owned subsidiary corporations of BCLP are subject to income taxes and, therefore, report an income tax provision and deferred income taxes in accordance with Financial Accounting Standards Board Statement No. 109.

[a]The prepaid income tax and deferred tax accounts presented above represent the accounts of the two wholly owned subsidiary corporations of BCLP. Such accounts do not impact the taxable income and cash flow projections required in this case study.

[b]Includes deferred compensation liability.

unit holders (assume the unit holder is an individual). Write a tax research memorandum communicating the results of your research. The memorandum should include relevant IRC Sections, Regulations, IRS Notices, and committee reports. No court decisions are available.

2. Identify the relevant tax and nontax factors that BCLP should consider when evaluating the available options.

TABLE 4
TAXABLE INCOME AND CASH-FLOW PROJECTION ASSUMPTIONS

Based on the June 30, 1998 income statement information, apply the following assumptions to project revenues and expenses for 1999 through 2003:

Revenues:

Ticket sales	20% increase in 1999
	A 15% increase in 2000, 10% increase each year in 2001, 2002, and 2003
Television, cable, and radio	8% per year increase
Other	2% per year increase
Playoffs	No playoff revenues

Costs and Expenses:

Team expenses	15% increase each year in 1999 and 2000, a 10% increase each year thereafter
Game expenses	10% per year increase
Playoffs	No playoff expenses
General and administrative	8% per year increase
Selling and promotional	5% per year increase
Depreciation	20% increase in 99, 10% increase each year thereafter
Amortization of NBA franchise	Same as '98
Interest expense	Same as '98
Interest income	Decreases 10% per year
Revenue from league expansion	No revenue
Gains (losses) on securities	No gain or loss

In preparing your projections, make the following additional assumptions:

1. The only book-tax differences are depreciation, amortization of the NBA franchise, and deferred compensation. Assume tax depreciation equals 140 percent of financial statement depreciation. Assume the amortization of the NBA franchise is the same for tax and financial statement purposes. Assume the cash payment for deferred compensation exceeds the financial statement expense by $3.5 million in 1999 and 2000, $3.0 million in 2001 and 2002, and $2.5 million in 2003. These assumptions will impact the computation of taxable income.
2. BCLP will distribute 90 percent of the after-tax cash flow to the investors.
3. The number of partnership units at June 30, 1998 is 5,596,164.

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3. Use the information provided in Tables 1–4 to prepare a spreadsheet that calculates the after-tax net income and after-tax cash flow for BCLP for 1999–2003 (five years) under each of the options identified under Requirement 1.
4. Use the information provided in Table 1 to prepare a spreadsheet that calculates a partner's basis in his partnership interest as of June 30, 1998 assuming he purchased 1,000 units at the initial offering price of $17.50 in 1986. Calculate the after-tax cash flow for this individual investor using the information determined in Requirement 3 under the three options and the partner's resulting basis in his investment at June 30, 2003 under the three options. Assume the individual investor has a 31 percent marginal tax rate.
5. What option would you recommend to BCLP? Write a memorandum that supports your decision by taking into account both tax and nontax factors. Include spreadsheet calculations as appropriate.
6. Prepare a PowerPoint presentation for BCLP's Vice President of Finance to communicate your recommendation, including the reasons supporting your decision. The presentation should include a review of the available options, the pros and cons of each option, and your final recommendation.

TEACHING NOTES

Based on the actual decision faced by BCLP, this case can be used at a number of different levels, including an entity-based undergraduate tax course, a graduate tax course, or an accounting systems class for students with sufficient tax knowledge.[2] Instructors may include different requirements depending on student ability and instructional objectives.

A potential concern with this case is that BCLP's decision is available to resourceful students through Securities and Exchange Commission filings on the Internet. We have dealt with this issue by discussing it with the class before assigning Requirements 3 through 6. (Based on our experience, students rarely raise the issue of a "right" answer during the research and factor identification requirements [Requirements 1 and 2].) We tell the students that BCLP's decision is available on the Internet with a little searching. We also explain that BCLP selected a creative tax-planning option that is not an acceptable solution to the requirements of this case. Therefore, students (or groups) turning in solutions based on BCLP's actual decision will not score well on the case study. We also tell the class that we will discuss BCLP's choice after the case study is completed. After this discussion, we have found that most students do not search for BCLP's decision. For the few students who do look at the prospectus, we find that most of them give up trying to wade through the legal document. However, these students typically figure out that BCLP chose to split the PTP into two different entities. Most of these students verify with the instructor that they must choose only one entity for the case study solution. By forcing students to chose one entity (the three options), the problem with students trying to use the BCLP decision significantly decreased. A few students always find the prospectus extremely interesting and they ultimately enliven the class discussion about BCLP's decision.

After the class completes the final requirements, we discuss BCLP's decision. We first provide the class with the ownership information regarding BCLP (the Gaston family through Gaston Affiliates owned 47.8 percent of BLCP and the public owned the remaining 52.2 percent). This information starts the class speculating about the potential influence of the Gaston family on the final structure. Appendix C provides a summary of the final structure. The decision to split the entity into two separate entities allows for a discussion of the creativity involved in tax planning and how tax planning moves from the simple one-dimensional solution (the case requirement) to the more complex multi-dimensional solution. The use of subordinated debentures in the corporate entity provides a good opportunity to discuss the benefits of debt vs. equity across entities.

Teaching Strategies

Several possible approaches can be used to teach this case and extend the basic requirements. We have found that the case study works best when assigned to students in stages. We typically assign the research section (Requirements 1 and 2) early in the semester. After the research requirements have been turned in, the instructor should lead a class discussion of the solution so that all students understand the three options (and the tax consequences of each option) available to BCLP before continuing with the spreadsheet and decision requirements (Requirements 3–6). Students must thoroughly understand the three options to prepare the spreadsheet analysis. We have found that reviewing the principals of spreadsheet design improves the quality of the final spreadsheets. Students should be reminded to use a vertical look-up table (discussed in Appendix D) to calculate the tax liability. For instructors who are not familiar with the principles of good spreadsheet design, we have included a review of basic spreadsheet design later in this section. We also suggest working with an accounting systems instructor to identify the points that should be made when presenting the project to the class and to develop an approach to grading the spreadsheet.

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[2] We have used the case in a first undergraduate tax course that emphasizes entities. Various versions of the case have been used during three different semesters. Prior to enrolling in the tax course, students generally have completed two computer classes that cover word processing, spreadsheet and presentation software packages, and spreadsheet design.

The research requirements work well as either an individual or group assignment. We allow the students to perform the research and discuss the results with their group, but require them to write an individual tax-research memorandum. This approach allows the instructor to assess individual writing skills. Students generally have no difficulty identifying the three options available to BCLP. However, they struggle with identifying and understanding the tax consequences to the individual investor of BCLP being treated as a corporation. The students overall do a good job identifying the tax and nontax consequences.

We have found that the spreadsheet and decision requirements work better as a group assignment for several reasons. First, while students generally do not encounter difficulty in arriving at taxable income, they do struggle with double taxation vs. single taxation of business income when developing the worksheets. Their conceptual understanding of an individual paying tax on corporate dividends contrasted with an individual being taxed on his/her share of partnership income does not easily transfer to "real-world" analysis. The group setting allows the students to work through the individual investor issues in a more efficient manner. A second reason for using groups is the varying levels of technology skills between the students. By working in groups, the more advanced students help develop the skill levels of the less-knowledgeable group members. Many students comment about how much they learned about spreadsheets by working with another group member and having that student show them how to do things. A third reason for using groups is that students are typically uncomfortable making a final recommendation since there is not a "correct" answer. Working in a group provides the opportunity for discussion and a consensus decision.

Instructors requiring a class presentation may shorten the case by eliminating the written memorandum in Requirement 5. If formal class presentations are not required, a lively class discussion should develop as student groups informally present and defend their solutions. The instructor can guide the discussion and explain the more technical aspects as the discussion unfolds.

Spreadsheet Design Guidance

Students must prepare spreadsheets to complete Requirements 3 and 4. We have found that students who have not received prior instruction in the principles of spreadsheet design usually need some guidance in organizing their spreadsheets, as well as in choosing which tools to use. This section provides guidance to instructors in this area. Additional guidance on the principles of good spreadsheet design may be found in Kreie and Pendley (1998), and Hormann (1999). Additionally, Professor Raymond Panko, a leading researcher into spreadsheet errors (Hormann 1999), maintains a web site on spreadsheet errors at http://panko.cba.hawaii.edu/ssr/.

Overall Organization of the Workbook

Students should use one workbook, with individual sheets in the workbook designated for various components of the case project. The workbook should be logically ordered, with the documentation sheet (discussed below) as the first sheet. Additionally, the individual sheet tabs should be appropriately named to reflect the contents of each sheet. For this case, we ordered the sheets as follows: Documentation, NI and CF Projections, Partner's Basis, and Tax Rate Schedule.

The Documentation Sheet

The Documentation sheet should be the first sheet in the workbook. This sheet should indicate when the workbook was created and by whom, the purpose of the workbook, the source for any external data, a Table of Contents that lists each sheet in the workbook and its purpose, a list of the names and descriptions of any macros employed in the workbook, and any assumptions inherent in the workbook that are not included in the input section. For BCLP, almost all of the assumptions inherent in the workbook will be included in the input section. Therefore, students may simply add a note to the Documentation sheet referring the user to the input section for a list of assumptions employed. The Documentation sheet is invaluable when one person must pick up and complete a spreadsheet begun by someone else, as sometimes happens in practice.

The "NI and CF Projections" Spreadsheet

Following the Documentation sheet should be the sheet that calculates after-tax net income and cash flow for Requirement 3. We have named this sheet "NI and CF Projections." The sheet is organized in three sections. The "Input" section includes the assumptions inherent in the spreadsheet. For BCLP, the Input section should include the assumptions provided in Table 4 relating to projected increases and decreases in financial statement items. The "Calculations" section shows the intermediate calculations performed, while the "Output" section shows the "bottom-line" results. Each of these three sections should be clearly labeled and set apart from the other sections. We encourage color-coding to draw the eye in the desired direction. For this spreadsheet, we recommend using one color for the Input section and a different color for the other sections.

Input, Calculation, and Output sections are essential when a spreadsheet lends itself to sensitivity, or "what-if" analysis. Inexperienced spreadsheet designers often build one large spreadsheet with formulas related to assumptions embedded throughout. This is a mistake, because it is difficult to remember all of the places where assumptions have been entered when the user wishes to change the assumptions. By inputting data in a designated input section, the integrity of the spreadsheet is preserved. "What-if" analysis is easily accomplished by changing assumptions in the Input section and observing the results in the Output section. Instructors may want to have students explore various scenarios and observe the results in the Output section (see "Case Extensions" discussion below).

Encourage students to begin this sheet by thinking about how the sheet should be organized. Organization is one of the most overlooked spreadsheet design issues. Students tend to focus on the output without giving much thought as to how to organize the spreadsheet efficiently and effectively. We have found that in building complex spreadsheets such as this one, a sketch is helpful in determining the design of the spreadsheet. Have students begin by visualizing what they want the output to look like and sketch it. From there, they should work backward. The next step is to determine what calculations are needed to obtain the desired output and to sketch that section. Finally, students need to determine what inputs are needed to perform those calculations and to sketch the Input section. The completed sketch showing the Input, Calculations, and Output sections becomes the blueprint for the spreadsheet.

Once the sheet is created, the instructor should strongly encourage students to use the protection feature of their spreadsheet program to protect the entire spreadsheet except for the Input section. This will prevent formulas from being accidentally compromised. Appendix D provides instructions on how to protect the sheet from inadvertent changes.

The "Partner's Basis" Spreadsheet

The solution to Requirement 4 should be the third sheet in the workbook. Some students might use two sheets for this requirement. However, because calculation of the investor's tax basis is so short, it is not necessary to create two separate sheets.

Formulas on this sheet must link back to the "NI and CF Projections" created in Requirement 3 so that changes to the Input section in the "NI and CF Projections" sheet will automatically update this sheet. Good spreadsheet design dictates that changes as a result of sensitivity analysis be entered in only one place with linked spreadsheets being automatically updated. We recommend a notation at the top of this sheet to remind users that they will not make entries to this sheet. Protecting the spreadsheet (see Appendix D) is also recommended to prevent inadvertent compromise of formulas.

Because this sheet requires calculation of corporate income tax, a vertical look-up table (a "VLOOK-UP" table) is used to determine the correct tax. Our experience indicates that students often fail to express the tax rate schedule (presented in dollars) in the same units as other spreadsheet calculations (presented in thousands of dollars). By using a look-up table, the spreadsheet retains maximum flexibility. Any changes resulting from sensitivity analysis flow through automatically to this sheet, with the look-up table returning the correct tax on the new amount. Appendix D provides complete instructions on how to create the look-up table.

Case Extensions

An instructor who wishes to extend the case (or change the case for use by different groups) may provide the students with alternative assumptions for the spreadsheet calculations.[3] By changing the assumptions, the instructor can emphasize that the analysis is highly dependent on the assumptions used and that the recommendation may change if the assumptions change. We make a special effort to impress upon students the importance of assumptions in interpreting the output. For example, this case assumes that ticket sales increase by 20 percent in 1999, 15 percent in 2000, and then 10 percent annually for the next three years. If those assumptions are invalid, the output is invalid. This is a good opportunity to illustrate that projections are only as good as the underlying assumptions. Changing the assumptions also highlights the need for proper spreadsheet design. When a spreadsheet is designed properly with an Input section for all assumptions, the change in assumptions is an easy adjustment with the impact flowing through the entire worksheet.

The case framework can also be applied to other publicly traded partnerships that faced the choice-of-entity decision because of the tax law changes under OBRA 87. The October 1988 issue of the Stanger Register listed 119 PTPs (Terando and Omer 1993). A number of these PTPs did not lose their partnership classification in 1998 because at least 90 percent of the partnership's income consists of "qualified" income. Under Section 7704(d), qualified income includes interest, dividends, real property rents, gains from the sale or other disposition of real property, and income associated with mineral or natural resources. This exception primarily benefited real estate and natural-resource PTPs. Goldberg (1996) identified 75 remaining PTPs and estimated that approximately 30 of these faced the choice-of-entity decision in 1997. A listing of 43 PTPs is available in Terando and Omer (1993, Appendix B). Decisions made by other PTPs include:

Cedar Fair LP	Remained a PTP and pays the gross income tax
The Marina LP	Delisted and remains a private partnership
Servicemaster LP	Reorganized as a corporation and pays corporate income tax
Jones Intercable Investors LP	Sold all assets to the general partner, distributed proceeds to unitholders and dissolved

The information regarding these four PTPs is available through Securities and Exchange Commission filings on the Internet.

CASE SOLUTION

Requirement 1: Results of Tax Research

The relevant authorities necessary for answering the research question are available through free web sites on the Internet. If you would like to provide your students with a starting point, the following web sites are excellent:

http://www.willyancey.com

http://www.taxsites.com

The student should identify the following relevant authorities:

- Internal Revenue Code (IRC) Section 7704
- Regulation Sections 1.7704-1 and 1.7704-2
- IRS Notice 98-3, 1998-2 IRB 48
- House Committee Report Number 105-148
- General Explanation of '97 Tax Legislation prepared by the Joint Committee Staff

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[3] We change the assumptions regarding percentage increases in income and expenses each semester so that the spreadsheet results change slightly. This discourages students from "consulting" with others who have previously taken the class.

Identification of Available Options

IRC Section 7704 (a) provides that a PTP is treated as a corporation for tax purposes. For existing ("grandfathered") PTPs, this provision is effective for years beginning after December 31, 1997 (Regulation Section 1.7704-2(a) and (b)). Grandfathered PTPs are defined under OBRA 87 as PTPs existing on December 17, 1987. Because the BCLP units were sold prior to December 17, 1986, BCLP is an existing or grandfathered PTP. Given the effective date, BCLP is subject to the provisions of Section 7704 for the year beginning July 1, 1998.

Section 7704 (g), enacted under the Tax Reform Act of 1997 (TRA 97), allows a grandfathered PTP to elect, as an alternative to taxation as a corporation, to pay a gross income tax at a rate of 3.5 percent of gross income for taxable years beginning after December 31, 1997. The tax is paid by the partnership, not by the partners. The gross income tax cannot be offset by tax credits. (House Report No 105-148 (PL 105-34), p. 414; and Joint Committee Staff, General Explanation of '97 Tax Legislation (JCS—23-97), 12/17/97, p. 151)

After the tax law changes under TRA 97, grandfathered PTPs have three options for years beginning after December 31, 1997. The first option is to remain a PTP and pay the corporate tax on taxable income. The second option is to remain a PTP and pay the gross income tax. The third option is to cease trading the partnership units (thereby no longer meeting the definition of PTP) and remain a "pass-through" entity.

Impact on Partnership and Partners if PTP is Taxed as a Corporation

If BCLP decides to be taxed as a corporation, under Section 7704 (f)(1) the partnership is "deemed to (a) transfer all its assets (subject to liabilities) to a newly formed corporation in exchange for the corporation's stock; and (b) distribute that stock to its partners in liquidation of their interests in the partnership." This treatment results in the transformation of partners and partnership into shareholders and corporation, respectively.

The transformation is treated as a Section 351 transfer with nonrecognition unless the liabilities exceed the basis of the partnership assets. (The balance sheet provided in Table 3 indicates that BCLP's asset basis exceeds its liabilities.) The new corporation takes a carryover basis in the transferred assets. Upon distribution of stock to the former PTP partners, the partnership terminates under Section 708(b)(1)(A). Generally, under Section 731, no gain or loss is recognized to the partners or partnership upon the distribution by the PTP of the shares of stock.[4] The partners take a basis in the stock equal to the adjusted basis of the partner's interest in the partnership under Section 732(b). At this point, any income earned by the new corporation is subject to corporate income tax. Any subsequent distributions out of earnings and profits are taxed as dividends to the shareholders.

Under IRS Notice 98-3 (1998-2 IRB 48), the IRS will not challenge a PTP's conversion to a corporation that follows the rules in Proposed Regulation Section 1.743-2, as long as the conversion occurs before the IRS issues further guidance.[5] Proposed Regulation 1.743-2 provides that upon the contribution of assets by a partnership to a corporation, the special Section 743 basis accounts

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[4] The distribution of the stock in the corporation is not considered a distribution of marketable securities under Section 731(c). If the stock of the corporation becomes actively traded on the same day it is distributed to the unitholders, the "nonrecognition transaction" exception under Regulation Section 1.731-2(d)(2)(ii) applies. Under Regulation Section 1.731-2(d)(2)(ii), Section 731(c) does not apply to the distribution of marketable securities if such security was "acquired by the partnership in a nonrecognition transaction" as long as certain conditions are satisfied. The transfer of all of the assets of BCLP to a corporation would satisfy the requirements under the regulation. If the stock of the corporation does not become actively traded until the day after the transfer to the unitholders, the stock is not considered a "marketable security" because it does not meet the definition of "actively traded" under Regulation Section 1.731-2(c)(2).

[5] The conversion can be either a Section 7704(f) conversion or an actual transaction. Publicly traded partnerships are only treated as corporations under Section 7704. There is no requirement that the partnership actually incorporate under the law of the jurisdiction where it was organized.

are reflected in the basis of the assets in the hands of the corporation. (The Section 743 basis adjustments are beyond the content included in an introductory tax course and, therefore, not pursued in this case study).

Impact on Partnership and Partners if a PTP Elects to Pay Gross Income Tax

An electing PTP pays a tax equal to 3.5 percent of its gross income from the active conduct of trades or businesses by the partnership. The tax is paid by the partnership, not by the partners (Section 7704(g)(3)(A)). The partnership must make estimated payments of the gross income tax because the tax is treated as a tax imposed under Chapter 1 (Section 7704(g)(3)(C)), for all purposes other than determining any credit allowable under Chapter 1. Thus, the gross income tax cannot be offset by tax credits by either the partnership or the partners (H Rept No. 105-34, p. 414, Joint Committee Staff General Explanation of '97 Tax Legislation, 12/17/97, p. 151). In addition, the tax cannot be deducted by the partnership (Notice 98-3). If a partnership elects to pay the gross income tax, it is not treated as a corporation. Therefore, BCLP's status as a partnership would continue (House Report No. 105-148).

Partners in the PTP must reduce the adjusted basis of their partnership interests by a proportionate share of the gross income tax paid by the partnership (Section 705(a)(2)(B) and Notice 98-3). Since the business continues to be treated as a partnership, the partners are taxed on their distributive share of partnership income. However, the partner's share of the gross income tax is not deductible by the partner.

IRS Notice 98-3 provides procedural requirements for making the election to pay the gross income tax under Section 7704(g). To make the election, a partnership must file a notification statement with the Memphis Service Center indicating that the partnership consents to the imposition of a 3.5 percent tax on gross income.

Impact of Delisting on Partnership and Partners

If the partnership ceases to trade units on an established securities market and the units are not readily tradable on a secondary market (Section 7704(b)), the partnership will not be subject to either the corporate income tax or the gross income tax, and the partnership will remain a pass-through entity for tax purposes. Regulation Section 1.7704-1(b) defines an established securities market and Regulation Section 1.7704-1(c) defines readily tradable on a secondary market or the substantial equivalent thereof.

If the partnership remains a pass-through entity for tax purposes, the tax treatment of the partners will not change. Table 1 provides the taxable income and cash distributions from BCLP for 1986 through 1997. Students should be aware that the cash distributions might exceed taxable income, resulting in a net decrease in the partner's basis in his partnership interest. Once basis is reduced to zero, cash distributions in excess of taxable income are subject to tax under Section 731(a)(1). The gain is capital gain under Section 741.

Other, more creative, options are available to BCLP. These additional options, such as splitting the entity, are beyond the scope of an introductory tax course and are not pursued in this analysis. However, Appendix C discusses BCLP's actual restructuring decision that can be presented in class as an example of creative tax planning.

Requirement 2: Identification of Tax and Nontax Factors

The decision regarding choice of entity requires careful consideration of both tax and nontax factors unique to the particular business and investors. Tax textbooks generally review a laundry list of nontax considerations regarding the choice of entity. The two most important nontax factors in this case are the transferability of interests and the after-tax cash flow available for distribution. Prior to the change in tax law, an investment in BCLP was readily traded on the New York or Boston Stock Exchanges and, therefore, a liquid investment for the unitholders. If BCLP remains a pass-through entity without paying the gross income tax, the partnership must delist the units from the stock exchange. The units would become a less liquid investment, which could result in a significant decline in the market value of the units.

The after-tax cash flow available for distribution is calculated under Requirement 3. Students should understand that different investors have different investment objectives. Some investors are interested in yearly cash distributions while others invest mainly for capital appreciation. Table 1 indicates that BCLP made cash distributions to investors on a yearly basis. This fact suggests that cash distributions are important to BCLP investors. Thus, any significant decline in cash available for distribution should be taken into consideration in making the entity decision.

Tax textbooks identify numerous tax factors that must be evaluated before deciding on the choice of entity. For this case study, students should identify the following relevant tax issues:

- Taxability of income at the entity level (payment of corporate tax, payment of gross receipts tax, or no tax payment);
- Taxability of income at the investor level (taxable dividend income or taxable share of partnership income);
- Tax basis in investment (stock basis fixed at date of transformation to corporation vs. yearly adjustments to basis in partnership units); and
- Potential tax consequences from reorganizing as a corporation.

Requirement 3: Calculation of After-Tax Net Income and Cash Flow

The solution to this Requirement is presented in Appendix A. The formulas for the entire workbook are available from the authors upon request. In grading this Requirement, the instructor should allocate points for both the correct tax answer and good spreadsheet design. Instructors should either collect the computer disk or have the students print the formula display worksheet to facilitate grading the spreadsheet.

Calculation of Gross Income Tax

An additional question that must be answered to calculate the gross income tax is whether interest income is considered "gross income for the taxable year from the active conduct of trades and businesses by the partnership." This question can be used as an additional research project or the instructor can discuss the issue in class and provide the students with the answer. Although gross income from the active conduct of trades or businesses is not defined in Section 7704 or the regulations thereunder, Reg. §1.355-3(b)(2)(iv)(A) provides that the holding of stock, securities, land, or other property for investment purposes is not the active conduct of a trade or business. Example 1 under Reg. §1.355-3(c) provides that if a manufacturing corporation also owns investment securities, the holding of the investment securities is not the active conduct of a trade or business. The interest income earned by BCLP is generated from the holding of investments. Therefore, based on Regulation Section 1.355-3, the solution does not consider the interest income as gross income from the active conduct of a trade or business and does not subject the interest income to the gross income tax.

Requirement 4: Calculation of Tax Basis and After-Tax Cash Flow for the Individual Investor

Appendix B presents the solution to this Requirement. This spreadsheet should be the third sheet in the workbook. Again, the instructor should allocate points for both the correct tax answer and good spreadsheet design.

Requirement 5: Recommendation Regarding Choice of Entity

There is no right or wrong answer to the case. However, the students should identify the following issues in their analysis:

- The cash flow per unit and the after-tax cash flow for the individual investor are greatest if BCLP delists and remains a "pure" pass-through entity for tax purposes. However, the cost of this option is the decline in liquidity of the investment. Although the yearly return on investment is greater, the nontax cost may be considered significant by some investors.
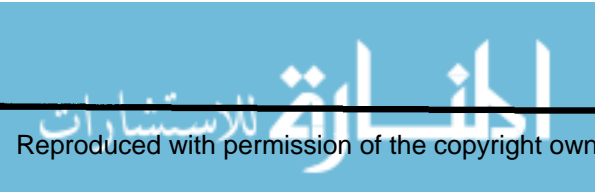
- The cash flow per unit is higher for the gross income tax option than the corporate tax option. However, the after-tax cash flow for the individual investor is greater under the corporate tax option than the gross income tax option. This result is due to the taxation of the investor's share of partnership income on the individual partner's tax return compared to the taxation of the cash distribution as a dividend on the individual investor's tax return. Since the distributed cash flow per unit is lower than the distributive share of partnership income, the tax treatment at the individual partner level significantly impacts the after-tax cash flow.

The switch in after-tax cash flow between entity and individual investor level (after-tax cash flow is higher under gross income tax option at the entity level and higher under the corporate tax option at the individual investor level) emphasizes the need for students to evaluate the final impact on the investor.

APPENDIX A

PROJECTED AFTER-TAX NET INCOME AND CASH FLOW SOLUTION TO REQUIREMENT 3

Instructions: Input data only into the Input section. You may not enter data anywhere else on this spreadsheet. Intermediate calculations may be viewed in the Calculation Section below. Final results appear in the Output Section.

Input Section

	1998	1999	2000	2001	2002	2003
Revenue Assumptions						
Ticket sales	39,108	1.20	1.15	1.10	1.10	1.10
Television, cable, and radio	28,002	1.08	1.08	1.08	1.08	1.08
Other	8,569	1.02	1.02	1.02	1.02	1.02
Playoffs	0	0	0	0	0	0
Costs and Expense Assumptions						
Team expenses	40,402	1.15	1.15	1.10	1.10	1.10
Game expenses	2,820	1.10	1.10	1.10	1.10	1.10
Playoffs	0	0	0	0	0	0
General and administrative	13,465	1.08	1.08	1.08	1.08	1.08
Selling and promotional	4,819	1.05	1.05	1.05	1.05	1.05
Depreciation	208	1.20	1.10	1.10	1.10	1.10
Amortization of NBA franchise	165	165	165	165	165	165
Interest expense	(6,018)	(6,018)	(6,018)	(6,018)	(6,018)	(6,018)
Interest income	6,402	5,762	5,186	4,667	4,200	3,780
Revenue from league expansion	0	0	0	0	0	0
Gain (loss) on securities	0	0	0	0	0	0
Other Assumptions						
Excess tax over book depreciation		0.4	0.4	0.4	0.4	0.4
Deferred compensation excess of tax over book		3,500	3,500	3,000	3,000	2,500
Distribution percent to investors		0.9	0.9	0.9	0.9	0.9
Number of partnership units		5,596	5,596	5,596	5,596	5,596
Number of units owned by individual investor		1,000	1,000	1,000	1,000	1,000
Individual tax rate		0.31	0.31	0.31	0.31	0.31

Calculation Section

(in thousands)	1999	2000	2001	2002	2003
Ticket Sales	46,930	53,969	59,366	65,303	71,833
Television	30,242	32,662	35,274	38,096	41,144
Other	8,740	8,915	9,093	9,275	9,461
Playoffs	0	0	0	0	0
Total Revenues	85,912	95,546	103,734	112,674	122,438
Team expense	46,462	53,432	58,775	64,652	71,118
Game expense	3,102	3,412	3,753	4,129	4,542
Playoffs	0	0	0	0	0
General and administrative	14,542	15,706	16,962	18,319	19,785
Selling expense	5,060	5,313	5,579	5,858	6,150
Depreciation	250	275	302	332	365
Amortization	165	165	165	165	165
Total Costs	69,581	78,302	85,536	93,455	102,125
Net Operating Income	16,331	17,244	18,198	19,220	20,313
Interest Expense	(6,018)	(6,018)	(6,018)	(6,018)	(6,018)
Interest Income	5,762	5,186	4,667	4,200	3,780
Income Before Tax	16,075	16,411	16,847	17,402	18,076

Option 1: Corporate Tax Calculations

After-Tax Net Income Calculation:

	1999	2000	2001	2002	2003
Income before tax	16,075	16,411	16,847	17,402	18,076
Less: additional tax depreciation	(100)	(110)	(121)	(133)	(146)
Less: additional deferred compensation deduction	(3,500)	(3,500)	(3,000)	(3,000)	(2,500)
Taxable income	12,475	12,802	13,726	14,269	15,429
Tax	4,266	4,381	4,704	4,894	5,313
Net Income after income tax	11,809	12,031	12,143	12,508	12,762

Net Cash Flow Calculation:

	1999	2000	2001	2002	2003
Income before tax	16,075	16,411	16,847	17,402	18,076
Less: income tax	(4,266)	(4,381)	(4,704)	(4,894)	(5,313)
Plus: depreciation	250	275	302	332	365
Plus: amortization	165	165	165	165	165
Less: excess deferred compensation	(3,500)	(3,500)	(3,000)	(3,000)	(2,500)
After-tax cash flow	8,723	8,970	9,610	10,005	10,793

Option 2: Gross Income Tax Calculations

After-Tax Net Income Calculation:

	1999	2000	2001	2002	2003
Income before tax	16,075	16,411	16,847	17,402	18,076
Less: Gross income tax	(3,007)	(3,344)	(3,631)	(3,944)	(4,285)
Net income after tax	13,068	13,067	13,216	13,458	13,790

Net Cash Flow Calculation:

	1999	2000	2001	2002	2003
Income before tax	16,075	16,411	16,847	17,402	18,076
Less: Gross income tax	(3,007)	(3,344)	(3,631)	(3,944)	(4,285)
Plus: depreciation	250	275	302	332	365
Plus: amortization	165	165	165	165	165
Less: excess deferred compensation	(3,500)	(3,500)	(3,000)	(3,000)	(2,500)
After-tax cash flow	9,983	10,007	10,683	10,956	11,821

Calculation Section
(in thousands)
Option 3: Partnership Calculations

	1999	2000	2001	2002	2003
After-Tax Net Income Calculation:					
Income before tax	16,075	16,411	16,847	17,402	18,076
Less: additional tax depreciation	(100)	(110)	(121)	(133)	(146)
Less: additional deferred compensation deduction	(3,500)	(3,500)	(3,000)	(3,000)	(2,500)
Taxable Income	12,475	12,802	13,726	14,269	15,429
Less: tax	0	0	0	0	0
Net income after tax	12,475	12,802	13,726	14,269	15,429
Net Cash Flow Calculation:					
Income before tax	16,075	16,411	16,847	17,402	18,076
Less: income tax	0	0	0	0	0
Plus: depreciation	250	275	302	332	365
Plus: amortization	165	165	165	165	165
Less: excess deferred compensation	(3,500)	(3,500)	(3,000)	(3,000)	(2,500)
After-tax cash flow	12,989	13,351	14,314	14,899	16,106

Output Section
Option 1: Corporation

		1999	2000	2001	2002	2003
	After-tax NI	11,809	12,031	12,143	12,508	12,762
	After-tax cash flow	8,723	8,970	9,610	10,005	10,793
	Per unit	1.56	1.60	1.72	1.79	1.93
	Per unit distribution	1.40	1.44	1.55	1.61	1.74

Option 2: PTP paying gross income tax

		1999	2000	2001	2002	2003
	After-tax NI	13,068	13,067	13,216	13,458	13,790
	After-tax cash flow	9,983	10,007	10,683	10,956	11,821
	Per unit	1.78	1.79	1.91	1.96	2.11
	Per unit distribution	1.61	1.61	1.72	1.76	1.90

Option 3: Partnership

		1999	2000	2001	2002	2003
	After-tax NI	12,475	12,802	13,726	14,269	15,429
	Per unit after tax NI	2.23	2.29	2.45	2.55	2.76
	After-tax cash flow	12,989	13,351	14,314	14,899	16,106
	Per unit	2.32	2.39	2.56	2.66	2.88
	Per unit distribution	2.09	2.15	2.30	2.40	2.59

APPENDIX B

CALCULATION OF PARTNER'S PER-UNIT BASIS IN INTEREST AND AFTER-TAX CASH FLOW FROM INVESTMENT SOLUTION TO REQUIREMENT 4

Note: This spreadsheet does not require any input. Results here flow from NI and CF Projections spreadsheet. No changes are permitted on this spreadsheet. Please make changes in the Input section of the NI and CF Projections spreadsheets.

Calculation of Partner's Per-Unit Basis

Year Ended June 30	Taxable Income Per Unit	Distribution Per Unit	Partner's Basis Per Unit
Cost at purchase			17.50
1987	0.00	0.70	16.80
1988	1.00	1.60	16.20
1989	1.10	1.60	15.70
1990	0.80	1.35	15.15
1991	0.10	1.40	13.85
1992	0.05	2.25	11.65
1993	0.05	1.25	10.45
1994	2.00	1.25	11.20
1995	1.60	3.00	9.80
1996	1.60	1.50	9.90
1997	0.05	1.00	8.95
1998	1.20	2.00	8.15

Calculation of Partner's Individual After-Tax Cash Flow from Investment

Option 1: Individual Partner's Basis if Taxable as Corporation

Year Ended June 30	Taxable Dividend Per Unit	Total Taxable Dividend	Tax @ 31%	After-Tax Cash Flow	Tax Basis
Beginning Tax Basis					8,150.00
1999	1.4	1,402.9	434.9	968.0	0.00
2000	1.4	1,442.6	447.2	995.4	0.00
2001	1.5	1,545.5	479.1	1,066.4	0.00
2002	1.6	1,609.0	498.8	1,110.2	0.00
2003	1.7	1,735.7	538.0	1,197.6	0.00
Total		7,735.8		5,337.7	8,150.00

Option 2: Individual Partner's Basis if PTP Pays Gross Income Tax

Year Ended June 30	Allocable Share of P'ship Income	Total Taxable Income	Tax @ 31%	Per-Unit Cash Distribution	Total Cash Distribution	After-Tax Cash Flow	Tax Basis
Beginning Tax Basis							8,150.00
1999	2.23	2,229.21	691.06	1.61	1,605.44	914.38	623.77
2000	2.29	2,287.57	709.15	1.61	1,609.36	900.21	678.22
2001	2.45	2,452.80	760.37	1.72	1,718.15	957.79	734.65
2002	2.55	2,549.78	790.43	1.76	1,761.91	971.48	787.87
2003	2.76	2,757.14	854.71	1.90	1,901.06	1,046.35	856.08
Total					8,595.92	4,790.21	11,830.59

Option 3: Individual Partner's Basis if Delist and Remain Partnership

Year Ended June 30	Allocable Share of P'ship Income	Total Taxable Income	Tax @ 31%	Per-Unit Cash Distribution	Total Cash Distribution	After-Tax Cash Flow	Tax Basis
Beginning Tax Basis							8,150.00
1999	2.23	2,229.21	691.06	2.09	2,089.03	1,397.97	140.19
2000	2.29	2,287.57	709.15	2.15	2,147.17	1,438.02	140.40
2001	2.45	2,452.80	760.37	2.30	2,302.06	1,541.69	150.74
2002	2.55	2,549.78	790.43	2.40	2,396.14	1,605.71	153.64
2003	2.76	2,757.14	854.71	2.59	2,590.25	1,735.53	166.90
Total					11,524.65	7,718.92	8,901.87

Output Section	Total Cash Distribution	After-Tax Cash Flow	Tax Basis
Option 1: Partner's After-Tax Cash Flow if Taxable as Corporation	7,735.88	5,337.76	8,150.00
Option 2: Partner's After-Tax Cash Flow if PTP Pays Gross Income Tax	8,595.92	4,790.21	11,830.59
Option 3: Partner's After-Tax Cash Flow if Delist and Remain Partnership	11,524.65	7,718.92	8,901.87

APPENDIX C
BCLP'S DECISION

BCLP decided to separate the partnership into two entities, BCLP II (to be taxed as a corporation) and Castle Creek (to remain a limited partnership). Unitholders of BCLP were allowed to decide which entity they wanted to own. Those electing to own units in BCLP II received one unit in BCLP II plus 6 percent Subordinated Debentures. The attributes of BCLP II include:

- BCLP II units will trade on the New York and Boston Stock exchanges.
- The subordinated debentures received by BCLP II unitholders will have annual interest payments and will trade on the NYSE
- Unitholders electing to receive BCLP II units will receive $1 for each BCLP unit formerly held
- BCLP II will be taxed as a corporation
- Distributions from BCLP II will be at the discretion of the General Partner

The subordinated debentures provide the annual cash flow to the BCLP II unitholders. The partnership does not plan to make annual distributions with respect to the BCLP II units. The tax benefits of the deductibility of the interest on the subordinated debentures have the effect of reducing BCLP II's taxable income and mitigating the impact of the corporate tax on BCLP II.

Those electing to own interests in Castle Creek received one interest in Castle Creek for each 100 BCLP units previously held. The attributes of Castle Creek include:

- Castle Creek will not be traded on any exchange, making the investment illiquid and subject to severe transfer restrictions.
- Castle Creek will be a "pass-through" entity for tax purposes
- Distributions from Castle Creek will be at the discretion of the General Partner

The prospectus did not discuss the anticipated level of annual distributions from Castle Creek.

Ultimately, holders of approximately 48.3 percent of BCLP units chose to continue their investment in the public partnership (BCLP II). Holders of approximately 51.7 percent of BCLP units chose to continue their investment in the private partnership (Castle Creek) (Dow Jones News Service 6/30/98). Gaston Affiliates (the Gaston family was majority owner of the Celtics prior to the formation of the PTP) held approximately 47.8 percent of the BCLP units prior to the reorganization and elected to continue their investment through the private partnership (Castle Creek).

The Boston Celtics basketball team is actually owned by a separate limited partnership, Celtics Limited Partnership (CLP). Prior to the reorganization, BCLP owned a 99-percent-limited-partnership interest in CLP. After the reorganization, ownership of the partnership interest in CLP was allocated between the two entities, BCLP II and Castle Creek, based on the proportion of BCLP units exchanged for BCLP II and Castle Creek interests, respectively. All other assets of BCLP (including marketable securities and short-term investments) were allocated between the BCLP II and Castle Creek in the same manner.

APPENDIX D
SPREADSHEET DESIGN TOPICS

Protecting the Spreadsheet

Once a spreadsheet has been designed and is ready for use, the designer may want to use the "protection" feature available in Excel to prevent unauthorized changes to the spreadsheet. Students are often unaware of the "Protection" feature and what it does. When protection is turned on for a particular part of the spreadsheet, changes cannot be made to the protected cells. For the BCLP case, future users of the spreadsheets should not be allowed to make changes to the Calculations Section (where the formulas are stored) or the Output Section (which depends directly on the formulas in the Calculations Section). However, changes to the Input Section are expected and are part of the design of the spreadsheet.

Protecting a spreadsheet is a two-step process. By default, every cell in an Excel spreadsheet is "locked." Locked cells can be protected. Step one is to "unlock" the cells that are not to be protected. Since we do not want the cells in the Input Section to be protected, we must unlock that part of the spreadsheet. To unlock the input section, first highlight the cells in the input section, then select Format, Cells, Protection, and remove the check mark from the "locked" box. When the protection feature is turned on, the cells in the Input Section will not be protected (i.e., changes may be made), while the remainder of the spreadsheet will be protected from changes. Step two is to turn on the Protection feature. To do so, choose Tools, Protection, Protect Sheet. A password is optional, but we ask our students not to use a password, since the password is extremely difficult to retrieve if the student forgets it. To Unprotect the sheet at any time, choose Tools, Protection, Unprotect Sheet.

Using a VLOOK-UP Table

A final design consideration for this case is the use of a look-up table to calculate the tax. A look-up table is an efficient way to build a formula that will calculate the tax on whatever output is generated from the Input Section. If the data to be searched (i.e., the tax rate schedule in this case) are organized in rows so that the search takes place from left to right, this is a horizontal, or HLOOK-UP table. If the data to be searched are organized in columns so that the search is from top to bottom, this is a vertical, or VLOOK-UP table. Since the tax rate schedule is organized in columns (i.e., one starts at the top and searches down until the correct tax bracket is found), a VLOOK-UP table is appropriate for this case.

There are a few rules to remember in using a VLOOK-UP table. A VLOOK-UP table can be composed of any number of columns; however, the left-most column must contain the compare values, sorted in ascending order. The compare values for this case are the tax bracket numbers that taxable income will be compared against to determine the tax bracket and subsequent tax. Another feature of the compare values is that only the smallest number in each range (tax bracket) is entered. This is necessary due to the way Excel searches a VLOOK-UP table. Excel starts at the top of the compare values (i.e., the tax brackets) and searches down the column until it encounters a number larger than the number it is looking for (i.e., taxable income). Excel then backs up one row and uses the compare value from that row (see Exhibit 1).

An example will help make this process clearer. In cell E68 on the NI and CF Projections spreadsheet, taxable income is $12,475 (all numbers are in thousands). We would like to enter a formula in cell E69 that will look up the taxable income, figure out which bracket is applicable, calculate the tax, and return the value to cell E69. The lookup formula to be entered in cell E69 has three components. Stated in plain English, it is:

=VLOOKUP(cell to be looked up, name of the lookup table, column number in the lookup table that contains the data you want retrieved into the spreadsheet)

Notice that the second component for the lookup formula refers to the name of the lookup table. To name the lookup table, highlight the values in the table (excluding the row titles) and type the desired name in the name box (see Exhibit 2).

In simple look-up tables, Excel returns a single value to the spreadsheet. For example, a look-up table designed to look up a city and determine the zip code would return the zip code. However, the tax calculation look-up table is more complex in that a calculation must be performed after locating the right tax bracket. The simplest way to accomplish this is to add columns for each of the five years of projections (1999–2003) and build formulas to calculate the tax in the look-up table itself. It is helpful to go through the process manually and then translate that process into a formula. Notice that the year 1999 is in column 2 of the look-up table, 2000 is in column 3, and so on. This is an important detail in the look-up formula, as it is the third component in the lookup formula.

Now we have all components to enter the look-up formula in cell E69. We know which cell will be looked up (E68), the name of the look-up table (tax), and which column we want from the lookup table (column two, where the 1999 tax calculation is located). Thus, the formula to

EXHIBIT 1
VLOOKUP TABLE COMPARE VALUES

Compare values (lowest numbers of tax rate schedule brackets) sorted in ascending order

	1999	2000	2001	2002	2003
0	1871	1920	2059	2140	2314
50	3114	3195	3427	3562	3852
75	4230	4341	4655	4840	5234
100	4849	4976	5336	5548	6001
335	4242	4353	4667	4852	5246
10000	4266	4381	4704	4894	5300
15000	4191	4315	4666	4872	5313
18333.333	4366	4481	4804	4994	5400

D13 = =('NI and CF projections'!E68-10000)*0.35+3400

EXHIBIT 2
NAMING THE VLOOKUP TABLE

Second, type in the name for the table here in the name box. We chose the name "tax."

First, select the range containing the table value, excluding the row titles.

tax = 0

	1999	2000	2001	2002	2003
0	1871	1920	2059	2140	2314
50	3114	3195	3427	3562	3852
75	4230	4341	4655	4840	5234
100	4849	4976	5336	5548	6001
335	4242	4353	4667	4852	5246
10000	4266	4381	4704	4894	5300
15000	4191	4315	4666	4872	5313
18333.333	4366	4481	4804	4994	5400

EXHIBIT 3
FORMULA FOR TAX CALCULATION USING VLOOKUP TABLE

Formula entered in Cell D13 that calculates tax.

Correct tax as calculated by formula in Cell D13 (shown above). This amount is returned to Cell E69 on the "NI and CF Projections" sheet.

D13 = =('NI and CF projections'!E68-10000)*0.35+3400

EXHIBIT 4
TAX CALCULATION FROM VLOOKUP TABLE INCLUDED IN PROJECTION SPREADSHEET

E69 = =VLOOKUP(E68,tax,2)

Look-up formula entered in Cell E69.

Correct corporate tax as calculated by look-up formula shown above.

enter in cell E69 is: =VLOOKUP(E68,tax,2). This formula has Excel take the taxable income number in E68 of $12,475 and go to the lookup table that is named "tax." Note that it does not matter that the lookup table is on another spreadsheet in the workbook. Because we had previously named the lookup table, Excel knows exactly where it is. Excel searches the left-most column containing the compare values (i.e., the tax brackets). Searching downward, Excel continues on until it encounters the value 15,000. This number is too high, so Excel backs off to the previous row containing the tax bracket 10,000. This is the appropriate bracket because taxable income is more than 10,000 but less than 15,000. The correct tax is calculated in the lookup table in cell D13, which is column two of the lookup table. Thus, Excel returns the correct tax of $4,266 to cell E69 on the NI and CF Projections spreadsheet (see Exhibits 3 and 4).

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