

Rivera Custom Cabinetry: A Case Study on Financial Statement Analysis Using Excel

Benoit Boyer, Sacred Heart University
Bridget Lyons, Sacred Heart University

This case illustrates the impact of various business transactions on a firm's financial statements. The objective of the case is to highlight the impact of these transactions on the various statements and to illustrate the links between financial statements and ratios. The case was developed for use as a final project in the introductory financial accounting class or as a review of key accounting concepts in the beginning of a corporate finance course. In each part of the case, students are asked to show the impact of a transaction on the firm's balance sheet and income statement. The impact on the cash flow statement and financial ratios will calculate automatically. The goal is to show students the link between common business transactions and the financial statements and ratios. Part 1 of the case focuses on the transactions involved in establishing the company. Part 2 illustrates basic operating transactions. Part 3 considers the firm under high growth and low growth and high operating leverage versus low operating leverage. In Part 4 more advanced concepts such as changes in accounting for inventory, investment in affiliates, foreign exchange gains and losses and sale of assets.

INTRODUCTION

A common concern among our faculty is that students are unable to apply accounting knowledge to analyze the impact of common business transactions upon the firm. While all business students complete at least 3 credits of accounting before entering a finance course, students still seem confused by the relationship between net income, retained earnings and cash, for example, or the impact of growth on financing needs and financial ratios. Furthermore, students are not comfortable analyzing the impact of common financial decisions by considering financial analysis of financial statements. This issue has also been identified by Arnold, Brooks and Nixon (2003) in a pedagogical note forthcoming in the *Journal of Financial Education*. They proposed a balance sheet-income statement template to illustrate the impact of transaction on these financial statements.

This case expands upon the Arnold, Brooks and Nixon template. It was created by an accounting professor who teaches the introductory financial accounting course and a finance professor teaching the corporate finance course. Our goal was to develop a case to be used at the end of the introductory financial accounting course to provide students the opportunity to integrate accounting concepts in a single exercise. Alternatively, the case may be used at the beginning of the corporate finance course to review key accounting concepts and illustrate the impact of common business transactions upon the key financial statements. The case requires students to show the impact of a transaction on the firm's balance sheet and income statement. The impact on the cash flow statement and financial ratios will calculate automatically because the template

has been designed to pull the balance sheet and income statement entries through the statement of retained earnings, cash flow statement and select financial ratios. The objective of this approach is for students to gain familiarity with analyzing the impact of a transaction on the statements, to understand the links between the statements and ratios, and to exhibit proficiency in using excel for financial analysis.

PART 1: BUSINESS START UP

Tomas Rivera had been interested in owning his own business for as long as he could remember. After completing college and working for several years, he is contemplating setting up his own business, Rivera Custom Cabinetry (RCC). Tomas believes that demand for custom cabinets will continue to rise in his target market of Fairfield and Westchester Counties. As a close friend and possible investor in the new firm, you have offered to assist Tomas with his analysis. You have volunteered to prepare financial statements for the firm to assist in analysis of the future profitability and funding needs of the firm.

Directions:

RCC plans to set up December 1, 2003. The firms' fiscal year end will be December 31st. To assist Tomas Rivera you must evaluate the impact of each of the following transactions on the firm's financial statements and ratios. You will show the results in Excel using the excel template provided.

For each transaction listed below you must show the impact on the balance sheet and the income statement. If you record the entries correctly, you will see a "balance" comment in the balance check row. If not, "Does not balance" will appear and you must reconsider your entry.

The impact of the transaction on the statement of retained earnings, statement of cash flows and select financial ratios will appear automatically since we have designed appropriate formulas into the template.

Remember, the balance sheet **MUST BALANCE** after each transaction. The cash flow statement **MUST RECONCILE** with the cash balance in the balance sheet.

1. Tomas plans to capitalize the firm with \$200,000 in savings.
2. RCC buys property for \$550,000, comprised of land valued at \$300,000; building valued at \$200,000; and equipment valued at \$50,000. RCC finances the purchase with 20% cash and the balance with a 30 year mortgage at 4%. The first payment will be due on January 1st.
3. RCC buys inventory of \$50,000, financed half cash and half on account.
4. It is now December 31st. Compute the depreciation using the straight line depreciation method with the half-year rule. The building will be depreciated over 20 years and the equipment over 5 years. Neither the building nor the equipment has a residual value.
5. Since it is year end you must also calculate the interest expense on the mortgage.

Interpret!

Now consider the impact of the following changes on the above results.

1. Suppose instead that the property of \$550,000 consisted of land of \$200,000 and building of \$350,000. What is the impact on net income, cash flow and retained earnings?
2. Now suppose the cash payment on the property comprised 30% instead of 20%. Find the impact on cash flow, net income and retained earnings.
3. Suppose all inventory was purchased on credit. How does this impact cash flow?

PART 2: YEAR 1 OPERATIONS

Directions:

In Part 1 of the Rivera Custom Cabinetry case, you assisted Tomas Rivera, founder of the firm, by preparing financial statements to reflect the set up of the business. Rivera Custom Cabinetry has been set up and is now operating. The firm has \$50,000 in inventory and sufficient equipment for initial operations.

Before considering the transactions below, examine the template. Notice that the financial statements are now more detailed. We have included additional accounts that you will now need to reflect the firm's operations.

For each transaction listed below you must show the impact on the balance sheet and the income statement. If you record the entries correctly, you will see a "balance" comment in the balance check row. If not, "Does not balance" will appear and you must reconsider your entry.

Remember, the balance sheet **MUST BALANCE** after each transaction. The cash flow statement **MUST RECONCILE** with the cash balance in the balance sheet.

1. On January 5, 2004 Rivera receives an order for cabinets worth \$50,000. The customer deposits 30% cash and will pay the balance upon delivery.
2. Rivera purchases cabinets for the customer from a supplier for \$25,000 in cash. He will need to refinish and customize the cabinets prior to delivery.
3. In refinishing and customizing the cabinets, RCC incurs \$5000 in production costs, comprised of \$2500 in labor costs paid in cash and \$2500 in materials purchased on account (due in 30 days).
4. Rivera delivers the cabinets to the customer and receives the balance of \$35,000.
Hint #1: What happens to the advance from customer?
Hint #2: What happens to inventory and cost of goods sold?
Hint #3: You will need to make entries in 5 accounts.
5. RCC has no other transactions during the month. Prepare the month end entries for depreciation and interest expense.

Interpret!

Now consider the impact of the following changes on the above results.

1. Suppose that the \$50,000 order had a 20% deposit. How do the results change?
2. Suppose all production costs are paid in cash. Do your results change significantly?

PART 3: ANALYSIS OF YEAR TWO OPERATIONS

Directions:

In Parts 1 and 2 of the Rivera Custom Cabinetry case, you assisted Tomas Rivera, founder of the firm, by preparing financial statements to reflect the initial set up and first month of operations of the business. Rivera Cabinetry is now in its second year of operations and Tomas has asked for your assistance in projecting the impact of expected business transactions on the financial statements for the second year. Tomas is particularly interested in the expected impact on cash flow.

Assume the following:

1. Sales are expected to be \$1,000,000. At the end of the year, Tomas estimates that 90% of the amount will have been received while 10% will still be receivable.
2. The cost of the cabinets will represent 50% of the sales. Tomas estimates that 90% of the amount will have been paid while 10% will still be payable.
3. Installation costs will represent 20% of the sales. Marketing expenditures will total 5% of revenues. The amount payable at the end of the year will be negligible
4. RCC sold its equipment for \$25,000. It purchased new equipment for \$100,000 in cash. This equipment has a useful life of 5 years and has no residual value.
5. In addition to production costs, Tomas plans to take a salary of \$50,000.

Remember, the balance sheet **MUST BALANCE** after each transaction. The cash flow statement **MUST RECONCILE** with the cash balance in the balance sheet.

Interpret!

Now consider the impact of the following changes on the above results.

1. Suppose that only 75% of the sales have been received. What impact does this have on the firm?
2. Suppose that the firm can alter production so that the cost of cabinets rises to 60% of sales but installation costs fall to 10%. Does this have any impact on the firm's cash flow or financial ratios?
3. What if RCC delays purchasing the new equipment. How do the firm's results change?