

# Vance Corporation: Cash Flow Statement: Instructor Guide

**Title:**

Vance Corporation: Cash Flow Statement

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**Discipline:**

Accounting

**Target Audience**

Intermediate, accounting majors and finance majors

**Keywords**

Cash flow statement, financial accounting, intermediate accounting

**Length of Time/Staging**

The problem takes three seventy-five minute sessions.



## Abstract

Having completed the four phases of the Vance Corporation PBL unfolding problem, students will be able to prepare a comprehensive cash flow statement using both the direct and indirect methods.

## Date Submitted

5/4/2006

## Date Published

6/15/2006

## Format of Delivery

The problem is delivered in a cooperative learning setting with mini-lectures interspersed.

## Student Learning Objectives

Having completed the requirement of the Vance Corporation Problem-Based Learning unfolding problem, students will have fulfilled the following learning objectives:

1. Identify and understand the three main sections of the cash flow statement.
2. Conduct an analysis of balance sheet accounts necessary to identify cash flows.
3. Prepare a cash flow statement using the direct method.
4. Reconcile net income to cash provided from operating activities.
5. Prepare a cash flow statement using the indirect method.
6. Understand and explain the similarities and differences between the two methods of presenting the cash flow statement.

## Student Resources

Students may use an intermediate financial accounting text as a resource. Students should be referred to chapters dealing with the cash flow statement. For example, pp. 1203-1243 of the eleventh edition of Intermediate Accounting by Keiso, Weygandt and Warfield (Wiley) covers this topic.

## Author's Teaching Notes

1. Part 1 of the unfolding problem should be given to the students as a homework assignment prior the first class on this topic.
  - a. At the beginning of the first class period, give the students about five minutes to share their thoughts in their groups.
  - b. Randomly call on a student for the three types of cash flows. Write them on the board as the student responds.
    - i. Inflows and outflows from **operating activities**.
    - ii. Inflows and outflows from **investing activities**.
    - iii. Inflows and outflows from **financing activities**.



- c. Randomly call on another student for the definition of cash flows from operating activities. Any transaction that enters into the determination of net income.
    - i. Ask the student for an example of a cash inflow from operating activities.
    - ii. Ask the student for an example of a cash outflow from operating activities.
  - d. Randomly call on another student for the definition of cash flows from investing activities. Any transaction used in the acquisition or disposition of long term assets.
    - i. Ask the student for an example of a cash inflow from investing activities.
    - ii. Ask the student for an example of a cash outflow from investing activities.
  - e. Randomly call on another student for the definition of cash flows from financing activities. *Any transaction, other than the payment of interest, involving the firm and its creditors or its owners.*
    - i. Ask the student for an example of a cash inflow from financing activities.
    - ii. Ask the student for an example of a cash outflow from financing activities.
  - f. Randomly call on a student to give the two methods for preparing a cash flow statement.
    - i. The **direct** method.
    - ii. The **indirect** method.
    - iii. Ask where the difference lies. It is entirely in the operating section. In the direct method, we analyze balance sheet accounts to ascertain cash flows from operating activities. In the indirect method, we reconcile net income to cash flows from operating activities by adding back and subtracting non-cash items found on the income statement to net income in order to arrive at cash flows from operating activities.
    - iv. The FASB has indicated a preference for the direct method. Nevertheless, the vast majority of companies use the indirect method.
    - v. If the direct method is used the reconciliation between net income and cash flows from operating activities must still be shown.
  - g. Open the discussion to the entire class as to what financial information they should ask for in order to prepare the cash flow statement.
2. Pass out Part 2 of the unfolding problem. Give the students approximately five minutes to digest the information given.
    - a. Randomly call on a student to tell how this information may be used.
    - b. Introduce the concept of the input/output formula. For any account, there is a beginning balance and an ending balance. Inputs add to the balance and outputs decrease the balance. Our task will be to ascertain these inputs and outputs. The balance sheet gives use the beginning and ending balances.
    - c. Instruct the students to get out three sheets of accounting paper. (If you do not use accounting paper in your course, use notebook paper.) The Excel worksheet labeled "work paper" gives the format.
      - i. On the first page divide the area into two sections.
        1. The first will be labeled "cash" and should take up about two thirds of the page.
        2. The remainder of the page should be labeled "revenue/expense".

3. Further divide the "cash section into three sections. The first should take half the area and be labeled "operating activities". The other two, taking about one fourth each, should be labeled "investing activities" and "financing activities".
  4. Label the columns "beginning balance," "debits," "credits," and "ending balance".
    - ii. The second sheet will be for assets other than cash. For each of these accounts on the balance sheet allot five lines. Label the columns as before.
    - iii. The third sheet will be for liabilities and owners' equity. For each of these accounts on the balance sheet allot five lines. Label the columns as before.
  - d. Tell the students to enter the items with the beginning and ending balances from the balance sheet. Note the "revenue and expense" section has no beginning and ending balance. Give the students time to fill out the necessary information.
  - e. Ask the students where they would find the information necessary to complete the analysis of the accounts.
3. Pass out Part 3 of the unfolding problem.
- a. Give the students about five minutes in groups to discuss how to use the additional information.
  - b. Call randomly on a student for a report.
  - c. Demonstrate how to use the input/output formula to analyze an account using accounts receivable. Have Excel worksheet available.

Beginning balance	\$ 13,850
+ Sales (note—remove the sales from leases)	\$186,230
– Payments received	<u>X<sub>1</sub></u>
= Ending balance	<u><u>\$ 22,430</u></u>

X<sub>1</sub> = \$177,650.

- d. Tell the students that as they analyze the accounts they make "entries" to bring the beginning balance to the ending balance. Then for each debit they must make a corresponding credit somewhere and for each credit they make a corresponding debit somewhere.
- e. For the accounts receivable account:
  - i. Debit accounts receivable and credit revenue/expense for \$186,230 (demonstrate on the Excel worksheet).
  - ii. Credit accounts receivable and debit cash for \$177,650 (demonstrate on the Excel worksheet. Note the cash entry goes under operations because sales is used in the determination of net income.
- f. Give the problem back to the students with instructions to complete the analysis. Monitor the groups and frequently call for random reports (every five minutes or so). The solution is under the "Analysis" tab of the Excel worksheet. There are supporting entries and calculation under the "entries" worksheet.
- g. The attached Excel worksheet (tab "Analysis") contains the completed input/output formulae. A narrative of each account is contained below.

Beginning balance	\$44,450
+ Purchases	X <sub>2</sub>
- Cost of goods sold	<u>\$73,350</u>
= Ending balance	<u>\$22,430</u>
X <sub>2</sub> = \$72,400.	

i. Inventory

1. Purchases has a corresponding credit to accounts payable.
2. Cost of goods sold has a corresponding debit to revenue/expense.

ii. Prepaid Rent

Beginning balance	\$15,870
+ Rent paid	X <sub>3</sub>
- Rent expense	<u>\$ 4,350</u>
= Ending balance	<u>\$20,960</u>
X <sub>3</sub> = \$9,440.	

1. Rent paid has a corresponding credit to cash under operating activities.
2. Rent expense has a corresponding debit under revenue/expense.

iii. Lease payments receivable—analyze concurrently with unearned interest revenue.

Beginning balance	\$101,692
+ New leases (Amount of minimum lease payments)	\$ 36,624
- Payments received	X <sub>4</sub>
= Ending balance	<u>\$118,316</u>
X <sub>4</sub> = \$20,000	

iv. Unearned interest revenue—analyze concurrently with lease payments receivable.

Beginning balance	\$36,609
+ New leases	X <sub>5</sub>
- Interest revenue	<u>\$13,412</u>
= Ending balance	<u>\$42,594</u>
X <sub>5</sub> = 19,397.	

1. Three entries are shown under the entries tab of the excel spreadsheet. They are entered onto the worksheet in their respective balance sheet accounts and as follows in the cash/revenue/expense section of the worksheet.
2. Sales (the amount of the minimum lease payments) is credited to revenue/expense.
3. Cash is debited to cash under operating activities.
4. Interest revenue is credited to revenue/expense.

- v. Buildings and equipment - Buildings and equipment, accumulated depreciation and land must be analyzed concurrently.

Beginning balance	\$314,570
+ Equipment purchased	\$150,000
- Cost basis of building sold	X <sub>6</sub>
= Ending balance	<u>\$368,070</u>
X <sub>6</sub> = 96,500	

- vi. Accumulated depreciation - Buildings and equipment, accumulated depreciation and land must be analyzed concurrently.

Beginning balance	\$ 96,210
+ Depreciation expense	\$ 19,360
- Write off of depreciation for building sold	X <sub>7</sub>
= Ending balance	<u>\$105,860</u>
X <sub>7</sub> = \$9,710	

- vii. Land - Buildings and equipment, accumulated depreciation and land must be analyzed concurrently.

Beginning balance	\$80,000
+ No real estate acquired	0
- Cost basis of land sold	X <sub>8</sub>
= Ending balance	<u>\$68,810</u>
X <sub>8</sub> = \$11,190.	

1. The entries tab of the excel spreadsheet contains the calculation of the loss on the sale of the real estate. It also contains the journal entry for the sale of the real estate.
2. So, the following entries are made to the worksheet in the cash/revenue/expense section.
3. Cash is credited for the purchase of the equipment and debited for the proceeds of the sale of the real estate. Both entries are investing activities.
4. Depreciation and the loss on the sale of the real estate are both debited under revenue/expense.
5. Entries to the three balance sheet accounts keep the worksheet in balance.

- viii. Accounts Payable

Beginning balance	\$22,630
+ Purchases	\$72,400
- Cash paid to suppliers	X <sub>9</sub>
= Ending balance	<u>\$24,790</u>
X <sub>9</sub> = \$70,240.	

1. The entry for purchases has already been made to inventory.

2. The corresponding entry for cash is a credit under operating activities.

ix. Wages payable

Beginning balance	\$ 5,510
+ Wages expense	\$42,700
- Cash paid for wages	<u>X<sub>10</sub></u>
= Ending balance	<u>\$ 4,100</u>

X<sub>10</sub> = \$44,110

1. The corresponding entry for wages expense is debited to revenue/expense.
2. The corresponding entry for cash paid for wages is credited to cash under operating activities.

x. Interest payable

Beginning balance	\$22,240
+ Interest expense	\$14,300
- Cash paid for interest	<u>X<sub>11</sub></u>
= Ending balance	<u>\$28,050</u>

X<sub>11</sub> = \$8,940.

1. The corresponding entry for interest expense is debited to revenue/expense.
2. The corresponding entry for cash paid for interest is credited to cash under operating activities.

xi. Taxes payable

Beginning balance	\$ 7,195
+ Tax journal entry	\$10,816
- Taxes paid	<u>X<sub>12</sub></u>
= Ending balance	<u>\$13,776</u>

X<sub>12</sub> = \$4,235

1. Taxes must be analyzed simultaneously with deferred tax liabilities. The Excel spreadsheet contains two journal entries with respect to taxes.
2. The corresponding entry for provision for income taxes is debited to revenue/expense.
3. The corresponding entry for cash paid for taxes is credited to cash under operating activities.
4. The deferred tax liability account is credited to round out the entry.

xii. Notes payable

Beginning balance	\$171,150
+ New debt	X <sub>13</sub>
- Debt retired	0
= Ending balance	<u>\$177,600</u>

X<sub>13</sub> = \$6,450.

1. The additional information states that there is no new debt.
2. The corresponding entry for new debt is a credit to cash under financing activities.

xiii. Accrued pension costs

Beginning balance	\$43,606
+ Pension expense	\$ 7,035
- Cash contributions	X <sub>14</sub>
= Ending balance	<u>\$49,143</u>

X<sub>14</sub> = \$1,498.

1. The corresponding entry for pension expense is debited to revenue/expense.
2. The corresponding entry for cash contributions is credited to cash under operating activities.

xiv. Deferred tax liability

Beginning balance	\$14,282
+ Increase in deferred taxes	\$ 5,270
- Only goes in one direction	0
= Ending balance	<u>\$19,522</u>

1. This account was analyzed simultaneously with income tax payable.
2. Deferred taxes only go up or down in any one year. See the tax journal entry on the Excel spreadsheet.

xv. Common stock, \$ no-par

Beginning balance	\$100,000
+ New issue of stock	X <sub>15</sub>
- Stock retired	0
= Ending balance	<u>\$125,000</u>

X<sub>15</sub> = \$25,000

1. The additional information states that no stock was retired.
2. The corresponding entry for the issue of stock is a debit to cash under financing activities.

xvi. Retained earnings

Beginning balance	\$62,700
+ Net income	\$29,388
- Dividends declared and paid	<u>X<sub>16</sub></u>
= Ending balance	<u>\$80,711</u>
X <sub>16</sub> = \$11,377	

1. The corresponding entry for net income is a debit to revenue and expense.
  2. The corresponding entry for dividends declared and paid is a credit to cash under financing activities. Note we know the dividends are paid by the absence of a dividends payable account.
- h. As a check, foot the two columns of the revenue/expense account. They should be equal.
  - i. Once the analysis is complete, give the students time in groups to fill out the statement of cash flows under the direct method. Randomly call for a report.
    - i. The solution of for the direct method comes from the entries made to cash on the spreadsheet.
    - ii. Fill out solution on the Excel template labeled "Direct Template".
    - iii. The solution is on the Excel file labeled "direct."
  - j. The students may not have completed the reconciliation of cash from operations to net income. Provide them with the following guidelines:
    - i. Start with net income.
    - ii. Add decreases in assets that lead directly to income statement items. These include, but are not limited to all current assets, lease payments receivable, deferred tax assets, and prepaid pension costs.
    - iii. Deduct increases in assets that lead directly to income statement items (the same assets as above).
    - iv. Add increases to liabilities that lead directly to income statement items. These include, but are not limited to all current liabilities, deferred tax liabilities, and accrued pension costs.
    - v. Deduct decreases to liabilities that lead directly to income statement items (the same liabilities as above).
    - vi. Add non-cash expenses such as depreciation, depletion, and amortization.
    - vii. Deduct gains on dispositions.
    - viii. Add losses on dispositions.
    - ix. If done properly the result should be the cash from operations that you calculated using the direct method.
  - k. Give the students time to fill out the reconciliation in their groups.
4. Pass out Part 4 of the unfolding problem.
    - a. Give the students time, working in groups, to fulfill the requirements.
    - b. Randomly call upon a student for a response.
    - c. The learning objective is for students to recognize that the operating section of the cash flow statement under the indirect method is identical to the reconciliation of cash from operations to net income under the direct method. Also, the investing

and financing sections are the same under both methods. Fill out the solution on the Excel template labeled "Indirect Template". The solution is on the Excel file labeled "indirect."

5. Student questions and/or review.

## **Assessment Strategies**

During group work, instructors should monitor groups to assess student understanding. During whole-class discussion, instructors should call for student responses on a random basis. Both these techniques will provide formative assessment. Summative assessment can be attained with test questions calling for the preparation of a cash flow problem.