There will be a brief quiz on Chapter 4 in the next class - Weds.

The Accounting Process

Chapter 3

Cash Basis versus Accrual Basis Accounting

Measuring Income

The Income Statement report the revenues and expenses of a firm, for a particular period of time, stated according to the accrual basis of accounting.

The objective of preparing an income statement is to obtain a measure of operating performance that matches a firm's outputs (revenues) with the associated inputs (expenses).
Cash Basis versus Accrual Basis of Accounting

Cash Basis: (A COMPREHENSIVE BASIS OF ACCOUNTING THAT IS NOT GAAP):
Revenue is recorded only when the cash is received and,
expenses are recorded only when the cash is paid.

Accrual Basis: (GAAP)
Recognizing revenue when it is earned, without regard to when the cash is
received, and recognizing expenses when associated benefit (revenue) is recorded; also
known as the matching principle.
Statement of cash flows fills in the gap!
FASB and SEC are currently making this very complex. Quote from the CFO at
one of my SEC registrants: "Revenue MAYBE when cash is received and
expenses immediately," SAB 101.
NOTE: They are THE SAME in the long-term. Also the timing of recording revenues
and expenses under GAAP is a primary objective of high-level accounting.

LAB EXERCISES

I strongly recommend that you begin working on your lab exercises at home now.

Cash Basis versus Accrual Basis Example

Seminis, Inc. had the following transactions:
- In September 2000, Seminis purchased seed inventory for $18,000 on credit. Seminis paid the
  suppliers invoice in September 2000.
- In October 2000, Seminis sold the seed for $35,000 on credit.
- In November 2000, the customer paid the $35,000 due Seminis.

Compute the net income for September, October, and November under cash basis accounting and accrual
basis accounting.

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>$18,000</td>
<td>$35,000</td>
<td>$35,000</td>
<td></td>
</tr>
<tr>
<td>Expenses</td>
<td></td>
<td>$18,000</td>
<td></td>
<td>$18,000</td>
</tr>
<tr>
<td>Net income (loss)</td>
<td></td>
<td>$35,000</td>
<td></td>
<td>$17,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>$35,000</td>
<td></td>
<td></td>
<td>$35,000</td>
</tr>
<tr>
<td>Expenses</td>
<td>$18,000</td>
<td></td>
<td></td>
<td>$18,000</td>
</tr>
<tr>
<td>Net income (loss)</td>
<td></td>
<td>$17,000</td>
<td></td>
<td>$17,000</td>
</tr>
</tbody>
</table>
Cash Basis versus Accrual Basis Example

UC Construction signs an agreement to construct a garage for $22,000.

- In January, UC Construction begins construction, incurs costs of $18,000 on credit, and by the end of January delivers a finished garage to the buyer.
- In February, UC Construction collects $22,000 cash from the customer.
- In March, UC pays the $18,000 due the creditors.

Compute the net incomes for each month under cash basis accounting and accrual basis accounting.

### UC Construction Income Statement

<table>
<thead>
<tr>
<th></th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>$22,000</td>
<td></td>
<td></td>
<td>$22,000</td>
</tr>
<tr>
<td>Expense</td>
<td></td>
<td>(18,000)</td>
<td></td>
<td>(18,000)</td>
</tr>
<tr>
<td>Net Income</td>
<td>$22,000</td>
<td>(18,000)</td>
<td></td>
<td>4,000</td>
</tr>
</tbody>
</table>

### Accrual Basis

<table>
<thead>
<tr>
<th></th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>$22,000</td>
<td></td>
<td></td>
<td>$22,000</td>
</tr>
<tr>
<td>Expense</td>
<td>(18,000)</td>
<td>(18,000)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Income</td>
<td>4,000</td>
<td></td>
<td></td>
<td>4,000</td>
</tr>
</tbody>
</table>

Cash Basis versus Accrual Basis of Accounting

Why use the Accrual Basis of Accounting?

The Matching Principle – “let the expense follow the revenue.” Expenses are recognized on the income statement not when paid, or when the work is performed, or when a product is produced, but when the work or the product actually makes its contribution to revenue.

The matching principle dictates that efforts (expenses) be matched with accomplishment (revenues) whenever it is reasonable and practicable to do so.

- In our construction example, if materials were delivered to the job site and paid for, but not installed:
  - Has revenue from these costs been earned?
  - So what do we debit?

Cash Basis versus Accrual Basis Depreciation

Assume that in January of 1999, UC Company purchased equipment for $75,000. The equipment would be useful to UC for three years.

Question:

What impact would this equipment have on UC’s future Income Statements, if:

a. UC used the cash basis of accounting
b. UC used the accrual basis of accounting?
### Cash Basis versus Accrual Basis Example

**Cash Basis Accounting**

<table>
<thead>
<tr>
<th>Revenues</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100,000</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$300,000</td>
<td></td>
</tr>
<tr>
<td>Depreciation Expenses</td>
<td>$75,000</td>
<td>$75,000</td>
<td>$75,000</td>
<td>$75,000</td>
</tr>
<tr>
<td>Net Income (loss)</td>
<td>$25,000</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$225,000</td>
</tr>
</tbody>
</table>

**Accrual Basis Accounting**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$100,000</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$300,000</td>
<td></td>
</tr>
<tr>
<td>Depreciation Expenses</td>
<td>$75,000</td>
<td>$75,000</td>
<td>$75,000</td>
<td>$75,000</td>
</tr>
<tr>
<td>Net Income (loss)</td>
<td>$25,000</td>
<td>$75,000</td>
<td>$75,000</td>
<td>$225,000</td>
</tr>
</tbody>
</table>

### The Accounting Equation

**Assets = Liabilities + Equity**

OR stated another way:

**Equity = Assets – Liabilities**

### Simple Algebra

If you increase an asset and A = L + E is always true, then:

- L or E must also increase too. (Or maybe another A decreases).

This is why it is called a “dual entry” system, aka “self-balancing set of accounts.” For every debit, there is a “???” CREDIT!

**EXAMPLES:**

- Cash paid to purchase equipment (credit cash), where is the debit?
  - FIXED ASSETS

- Revenue is recorded when a sale is made (credit revenue). The amount has been billed to the customer but not yet received. Where is the debit?
  - ACCOUNTS RECEIVABLE

### Debits and Credits

**Balance Sheet**

- DR. <CR> <CR> <CR> <CR> <CR> <CR>

- Assets = Liab. + Equity

**Income Stmt.**

- DR. <CR> <CR> <CR> <CR> <CR>

- Revenue - Expenses

- Debits
  - Up

- Credits
  - Down

Not uncommon for negative equity (debit balance)
**Flow of Asset Costs**

<table>
<thead>
<tr>
<th>Balance Sheet</th>
<th>Income Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>Cost of Goods Sold</td>
</tr>
<tr>
<td>Building Equipment</td>
<td>Depreciation Expense</td>
</tr>
<tr>
<td>Prepaid Insurance</td>
<td>Insurance Expense</td>
</tr>
<tr>
<td>Intangible Asset</td>
<td>Amortization Expense</td>
</tr>
</tbody>
</table>

**Inventory / Cost of Goods Sold**

<table>
<thead>
<tr>
<th>Balance Sheet</th>
<th>Income Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets:</td>
<td></td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>75,000</td>
</tr>
<tr>
<td>Inventory</td>
<td>0</td>
</tr>
<tr>
<td>Liabilities:</td>
<td></td>
</tr>
<tr>
<td>Accounts payable</td>
<td>(30,000)</td>
</tr>
<tr>
<td>Equity:</td>
<td></td>
</tr>
<tr>
<td>Retained earnings</td>
<td>(45,000)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Revenues: 2004</th>
<th>Expenses: 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>75,000</td>
<td>(30,000)</td>
</tr>
</tbody>
</table>

Net (income) loss: (45,000)

Purchase inventory for $30,000. Sell for $75,000

Pay supplier $30,000. Receive $75,000 from customer
Balance Sheet

Assets:
- Cash: $30,000
- Accounts receivable: $75,000
- Inventory: $0

Liabilities:
- Accounts payable: $0

Equity:
- Retained earnings: $45,000

Income Statement

Sales: $75,000

Expenses:
- Cost of goods sold: $30,000

Net (income) loss: $(45,000)

Adjusting Entries

Purchase building for $1,000,000, 25 year useful life

Building / Depreciation Expense

Assets:
- Building: $1,000,000
- Accum. deprec.: $(40,000)

Liabilities:
- Notes payable: $(1,000,000)

Equity:
- Retained earnings: $40,000

Net (income) loss: $(40,000)

Notes payable: $(1,000,000)

Pay supplier $30,000. Receive $75,000 from customer
Adjusting Entries (Accrual Accounting)

In order for revenues to be recorded in the period in which they are earned, and for expenses to be recognized in the period in which they are incurred, adjusting entries are made at the end of the accounting period.

In short, adjustments are needed to ensure that the revenue recognition and matching principles are followed.

Prepayments and Accruals

1. Prepaid Expenses. Expenses paid in cash and recorded as assets before they are used or consumed.
2. Unearned Revenues. Revenues received in cash and recorded as liabilities before they are earned.
3. Accrued Revenues. Revenues earned but not yet received in cash.

Adjusting Entries (Prepaid Expenses)

Prepays are payments of cash that are recorded as assets before they are used or consumed. When a cost is incurred, an asset account is debited to show the service or benefit that will be received in the future. Prepays often occur in regard to:

- insurance
- supplies
- advertising
- rent
- maintenance on equipment
- fixed assets

Balance Sheet

Assets: 
Cash $6,000
Prepaid insurance 6,000

Liabilities:

Equity:

Revenues: 
June 2003
Net income (loss) ___

Expenses:

Income Statement

On June 1, 2003, Diamond Co. paid $6,000 for 12 months of insurance coverage. How is this transaction reflected in Diamond's financial statements on June 1, 2003?

Balance Sheet

Assets: 
Cash $6,000
Prepaid insurance 6,000

Liabilities:

Equity:

Revenues: 
June 2003
Net income (loss) ___

Expenses:

Income Statement

How is this transaction reflected in Diamond's financial statements for the month ending June 30, 2003?
How is this transaction reflected in Diamonds' financial statements for the month ending June 30, 2003?

How is this transaction reflected in Diamonds' financial statements for the month ending July 31, 2003?
Unearned revenues are the receipt of cash that is recorded as a liability because the revenue has not been earned. When cash is received, a liability account is credited to show the obligation to provide goods or service in the future. Unearned revenues often occur in regard to:

- rent
- magazine subscriptions
- customer deposits
- airline tickets
- school tuition

### Adjusting Entries (Unearned Revenues)

**Balance Sheet**

<table>
<thead>
<tr>
<th>Assets</th>
<th>October</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>12,000</td>
</tr>
<tr>
<td>Unearned revenue</td>
<td>(12,000)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Liabilities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unearned revenue</td>
<td>(12,000)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Retained earnings</td>
<td>(4,000)</td>
</tr>
</tbody>
</table>

**Income Statement**

<table>
<thead>
<tr>
<th>Revenues</th>
<th>October</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising revenue</td>
<td>(4,000)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net (income) loss</td>
<td>(4,000)</td>
</tr>
</tbody>
</table>

Pioneer Advertising Agency received $12,000 on October 2 from R. Knox for advertising services expected to be completed by December 31. Analysis reveals that $4,000 of those fees have been earned in October. How is this transaction reflected on Pioneers’ financial statements for the month of October?
Int Pioner Advertising Agency earned $2,000 in fees for advertising services that were billed to clients before October 31. How is this transaction reflected on Pioneers’ financial statements for the month of October?

### Adjusting Entries (Accrued Revenues)

<table>
<thead>
<tr>
<th>Balance Sheet</th>
<th>Income Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets:</td>
<td>Revenues:</td>
</tr>
<tr>
<td>October</td>
<td>Advertising revenue (2,000)</td>
</tr>
<tr>
<td></td>
<td>Expenses:</td>
</tr>
<tr>
<td></td>
<td>Net (income) loss (2,000)</td>
</tr>
<tr>
<td>Liabilities:</td>
<td>October</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Equity:</td>
<td></td>
</tr>
<tr>
<td>Retained earnings (2,000)</td>
<td></td>
</tr>
</tbody>
</table>

In October Pioneer Advertising Agency earned $2,000 in fees for advertising services that were billed to clients before October 31. How is this transaction reflected on Pioneers’ financial statements for the month of October?

At Pioneer Advertising, salaries were last paid on October 26; the next payment of salaries will not occur until November 9. After October 26, only three working days remain in October. Employees receive salaries of $2,500 per day. How are the unpaid salaries reflected on Pioneers’ financial statements for the month of October?

### Adjusting Entries (Accrued Expenses)

<table>
<thead>
<tr>
<th>Balance Sheet</th>
<th>Income Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets:</td>
<td>Revenues:</td>
</tr>
<tr>
<td>October</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expenses:</td>
</tr>
<tr>
<td></td>
<td>Net (income) loss (2,000)</td>
</tr>
<tr>
<td>Liabilities:</td>
<td>October</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Equity:</td>
<td></td>
</tr>
<tr>
<td>Salaries payable (7,500)</td>
<td></td>
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</tbody>
</table>

At Pioneer Advertising, salaries were last paid on October 26; the next payment of salaries will not occur until November 9. After October 26, only three working days remain in October. Employees receive salaries of $2,500 per day. How are the unpaid salaries reflected on Pioneers’ financial statements for the month of October?

### January, 2003 Transactions for Ace Inc.

- Ace Inc, issue stock for $77,000 cash.
- Ace purchased inventory for 52,000. Balance due in 45 days.
- Wages due employees for January amounted to $5,000. The wages were paid in February.
- Sold inventory costing $10,000 for $25,000. Customer has 30 days to pay.
- On January 2, paid $3,000 for advertising to be done in January and February.
- On January 2, purchased a copier for $6,000 cash. Copier is expected to be useful to Ace for two years.
- Received $13,000 from customers for amounts owed to Ace.
- Received $13,000 for advertising for amounts owed to Ace.
Ace, continued from prev. slide

From the previous slide, which items require an adjusting entry at the end of the month?
Advertising to be performed in January and February- one month consumed:
Advertising expense 1,500
Prepaid advertising 1,500
The photocopier good for two years- 1/24th consumed:
Depreciation expense 250
Accumulated depreciation 250

More Advanced Concepts

- The income statement “closes” out to what?
  - RETAINED EARNINGS
- If income is the only activity impacting retained earnings, what difference is there between retained earnings and an income statement which is for the period from inception to the date of the balance sheet? NONE

BONUS MATERIALS

- LOBSTER
- Revenue recognition:
  - Subscriptions
  - Your tuition
  - Point of sale
  - FOB shipping and receiving
- Cost recognition
  - Materials delivered to a job but NOT used
  - Advertising
  - periodicals (newspaper)
  - Billboard

More Bonus Materials

- The balance sheet approach. BECAUSE A=L+E, problems in one argument become apparent in another. You can run, but you can not hide!
- If a company had overstated revenue, how might management or the auditors detect this?
  - ACCOUNTS RECEIVABLE—
- Understated COS?
  - INVENTORY