



MSc in

**Financial
Management**

ATHENS UNIVERSITY OF
ECONOMICS & BUSINESS

Introduction to Accounting

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Perpetual vs Periodic Inventory System

Perpetual

- ◆ Used for all types of goods
- ◆ Keeps a running record of all goods bought, sold, and on hand
- ◆ Inventory counted at least once a year

Periodic

- ◆ Used for inexpensive goods
- ◆ Does **not** keep a running record of all goods bought, sold, and on hand
- ◆ Inventory counted at least once a year

The Perpetual System

- Optical scanner reads bar code, system
 - Records sale
 - Updates inventory records
- Two entries needed for each sale
 - Record revenue and asset received
 - Record cost of goods sold and reduction of inventory

Recording Transactions (Perpetual)

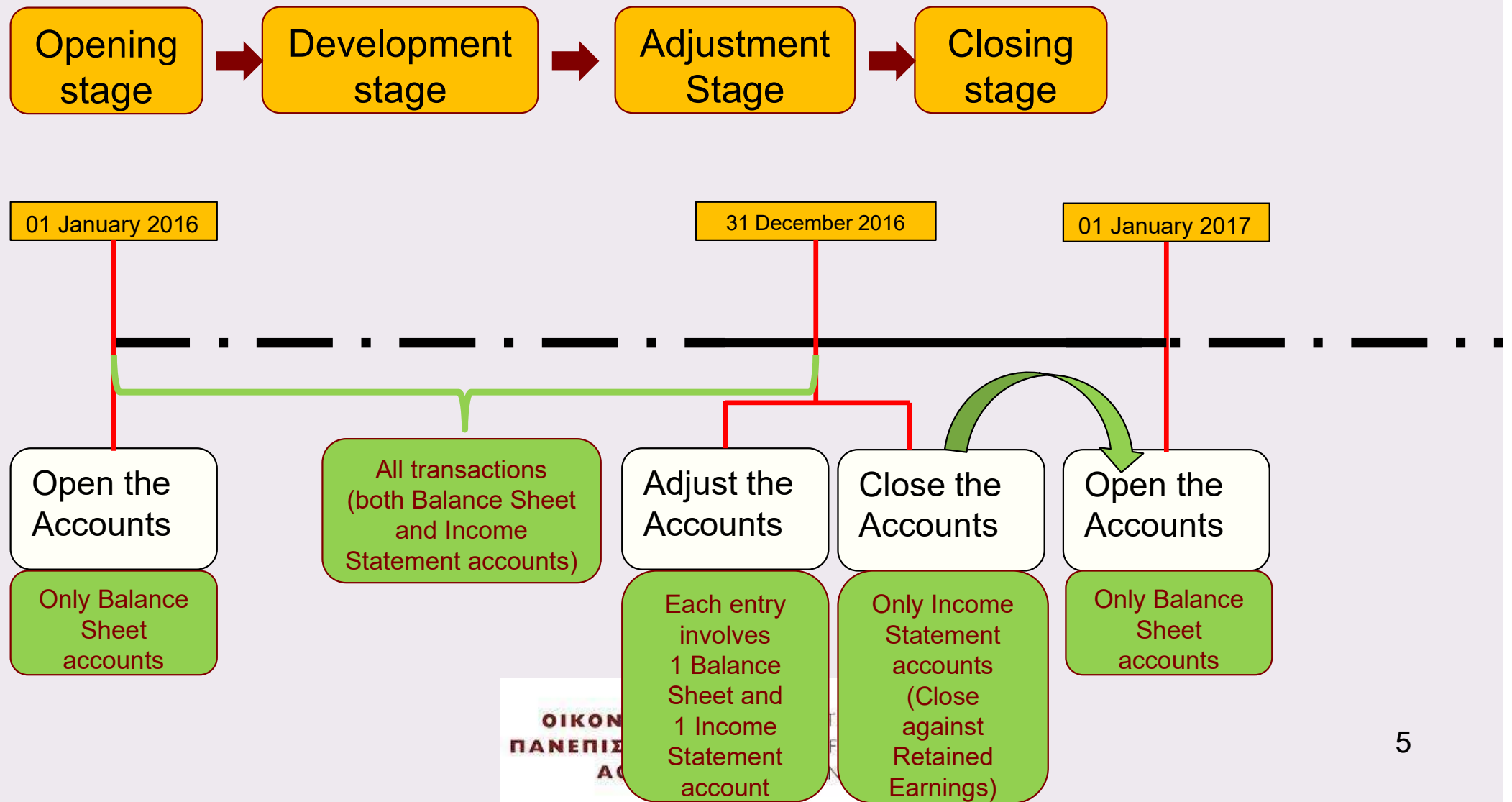
Purchase:

| | | | |
|---|---------------------------------------|---------|---------|
| 1 | Inventory | 500.000 | |
| | Accounts Payable | | 500.000 |
| | <i>Purchased inventory on account</i> | | |
| 2 | Accounts Payable | 500.000 | |
| | Cash | | 500.000 |

Sale:

| | | | |
|----------|------------------------------------|---------|---------|
| 1 | Accounts Receivable | 900.000 | |
| | Sales | | 900.000 |
| | <i>Sold on account</i> | | |
| 2 | Cost of Goods Sold | 450.000 | |
| | Inventory | | 450.000 |
| | <i>Recorded cost of goods sold</i> | | |

The Accounting Cycle



Adjusting Entries

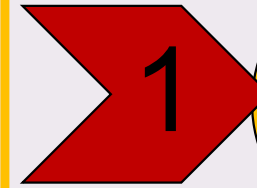
- Journal entries made to ensure that **revenues** and **expenses** are recognized in the proper accounting period.
 - Might span to more than one periods.
- Generally made at the end of the accounting period.
- Include at least one income statement account and one balance sheet account.

Purpose of the Adjusting Entries is to **measure income** and **update the balance sheet.**

Adjusting Entries

Deferred

- Prepaid Expenses
- Unearned Revenues



Paid or
Received
in
advance

Deferred

- Supplies Expense
- Depreciation



Expense
of Assets

Accrued

- Unrecorded Expenses
- Unrecorded Revenues



Payable or
Receivable

Deferred **VS** Accrued

- Adjusting entries are either deferrals or accruals.
 - A **deferral** is the **postponement of the recognition** of an expense already paid or of revenue received in advance.
 - The cash payment or receipt is recorded before the adjusting entry is made.
 - An **accrual** is the recognition of an expense or a revenue that **has arisen but not been recorded** during the accounting period.
 - The cash payment or receipt occurs in a future accounting period, after the adjusting entry has been made.

Prepaid (*Deferred*) Expenses

- An expense paid in advance. Prepaid expenses are assets because they provide a future benefit for the owner.

Cash Payment

BEFORE

Expense Recorded

- Prepayments often occur in regard to:

Rent, Insurance, Advertising, **Supplies**

Prepaid Expenses

A firm prepays three months' store rent (€3.000) on December 1:

| | | | |
|-------|------------------------------------|-------|-------|
| | | | |
| Dec 1 | Prepaid Rent (€1.000 x 3) | 3.000 | |
| | Cash | | 3.000 |
| | <i>Prepayment of 3 months rent</i> | | |

| Prepaid Rent | |
|--------------|---------|
| 3.000 | (01.12) |

| Cash | |
|-------|---------|
| 3.000 | (01.12) |

Prepaid Expenses

- During December, Prepaid Rent carries the balance of €3.000.
- At December 31, an adjusting entry transfers €1.000 ($€3.000 \div 3$) from Prepaid Rent to Rent Expense.

| | | | |
|--------|----------------------------|-------|-------|
| Dec 31 | Rent Expense | 1.000 | |
| | Prepaid Rent | | 1.000 |
| | <i>Rent expense - June</i> | | |

| Prepaid Rent | | | | Rent Expense | |
|--------------|---------|-------|---------|--------------|---------|
| 3.000 | (01.12) | 1.000 | (31.12) | → 1.000 | (31.12) |
| Bal | 2.000 | | | | |

Supplies

- On June 2, a firm paid cash of €700 for cleaning supplies:

| | | | |
|-------|--------------------------------------|-----|-----|
| Jun 2 | Supplies | 700 | |
| | Cash | | 700 |
| | <i>Purchase of cleaning supplies</i> | | |

| Supplies | | Cash | |
|----------|---------|------|---------|
| 700 | (02.06) | 700 | (02.06) |

Supplies

- At June 30 a physical count (inventory) indicates that €400 of supplies remain on hand.

| | | | |
|--------|--------------------------|-----|-----|
| Jun 30 | Supplies Expense | 300 | |
| | Supplies | | 300 |
| | <i>Supplies expensed</i> | | |

| Supplies | | | | Supplies Expense | | | |
|----------|---------|-----|---------|------------------|---------|--|--|
| 700 | (02.06) | 300 | (30.06) | 300 | (30.06) | | |
| Bal | 400 | | | | | | |

Example

- At the beginning of the month, supplies were €5.000.
During the month, €7.000 of supplies were purchased.
- At month's end, €3.000 of supplies are still on hand.

| | | | |
|--|------------------------------|-------|-------|
| | | | |
| | Supplies Expense (5 + 7 – 3) | 9.000 | |
| | Supplies | | 9.000 |

Depreciation of Plant and Equipment

- Non-Current tangible assets (buildings, furniture, and equipment):
 1. Decline in usefulness.
 2. Depreciation (expense) is recorded over the asset's useful life.
 3. Depreciation is the process of allocating cost to expense for a long-term plant asset.
 4. There are a number of methods for estimating depreciation.

Land is not depreciated!



Depreciation of Plant and Equipment

- On December 3 a firm purchases equipment on account for €24.000:

| | | | |
|-------|------------------------------|--------|--------|
| Dec 3 | Equipment | 24.000 | |
| | Accounts Payable | | 24.000 |
| | <i>Purchase of equipment</i> | | |

| Equipment | |
|-----------|---------|
| 24.000 | (03.12) |

| Accounts Payable | |
|------------------|---------|
| 24.000 | (03.12) |

Depreciation of Plant and Equipment

- Further information:
 - The firm uses the straight-line method.
 - The useful life is estimated in 5 years, with zero residual value.

Annual Depreciation: $\text{€}24.000 / 5 \text{ years} = \text{€}4.800$

Monthly depreciation: $\text{€}4.800 / 12 \text{ months} = \text{€}400$

Depreciation of Plant and Equipment

Depreciation expense for June is recorded as follows:

| | | | |
|--------|------------------------------------|-----|-----|
| Dec 31 | Depreciation Expense-Equipment | 400 | |
| | Accumulated Depreciation-Equipment | | 400 |
| | <i>Equipment Depreciation</i> | | |

| Equipment | |
|------------------------------------|---------|
| 24.000 | (03.12) |
| Accumulated Depreciation-Equipment | |
| 400 | (30.12) |

| Depreciation Expense-Equipment | |
|--------------------------------|---------|
| 400 | (30.12) |

Accumulated Depreciation

- Shows the sum of the depreciation expense.
 - The balance increases over the asset's life.
- One for each depreciable asset.
 - E.g. Accumulated depreciation – Building, Accumulated depreciation – Equipment, and so on.
- A contra asset account (normal credit balance).
 - A contra account:
 1. Always has a companion account (in this case Building, Equipment, etc.).
 2. Its normal balance is the opposite of the companion account.

Accumulated Depreciation

- WHY?

To maintain historical costs.

- The net amount of historic cost minus accumulated depreciation is called **carrying amount** or **net book value**:

| | | | |
|--------------------------------|----------|----------|--|
| Land | | € 18,000 | |
| Equipment | € 24,000 | | |
| Less: Accumulated Depreciation | (400) | 23,600 | |
| Book value of plant assets | | € 41,600 | |

Example

- Alpha Inc. possesses machinery with a value of €10.000. The annual depreciation is €500.

| | | <i>Dr.</i> | <i>Cr.</i> |
|---------|-------------------------------------|------------|------------|
| July 31 | Depreciation Expense- Machinery | 500 | |
| | Accumulated Depreciation- Machinery | | 500 |

- The carrying value will be:

| Property, Plant & Equipment | | |
|-----------------------------|--------|-------|
| Machinery | 10.000 | |
| (Acc. Depreciation) | (500) | 9.500 |

Adjustment for Prepaid (Deferred) Expenses

Asset Account

Adjusting entry
Credit

Expense Account

Adjusting entry
Debit

Unearned (*Deferred*) Revenues

- Receipt of cash before earning the revenue is recorded as a liability called **unearned revenues**.

Cash Receipt

BEFORE

Revenue Recorded

- Unearned revenues often occur in regard to:
Customer deposits, Airline-tickets, Magazine subscriptions, Rent

Unearned Revenues

- Firm A starts to perform services to Firm B, agreeing to receive €400 at the beginning of each month.
- Firm A collects the first amount on December 15:

| | | | |
|--------|--------------------------------|-----|-----|
| Dec 15 | Cash | 400 | |
| | Unearned Service Revenue | | 400 |
| | <i>Cash receipt in advance</i> | | |

| Cash | | Unearned Service Revenue | |
|------|---------|--------------------------|---------|
| 400 | (15.12) | 400 | (15.12) |

Unearned Revenues

- The Dec 31 unadjusted trial balance lists Unearned Service Revenue with a €400 credit balance.
- During the last 15 days of the month, A will earn half of the €400.
- On Dec 31, the following adjustment is made:

| | | | |
|--------|---------------------------------------|-----|-----|
| Dec 31 | Unearned Service Revenue | 200 | |
| | Service Revenue | | 200 |
| | <i>Revenue from service provision</i> | | |

| Service Revenue | | Unearned Service Revenue | | | |
|-----------------|-------------|--------------------------|-------------|--|--|
| | 200 (31.12) | 200 (31.12) | 400 (15.12) | | |
| | | | 200 Bal. | | |

Example

- During December Alpha Inc. received €1.400 from Delta Co. as advance payment for a service. By the end of the month it had completed €800 worth of the service.

| | | <i>Dr.</i> | <i>Cr.</i> |
|--------|--------------------------|------------|------------|
| Dec 05 | Cash | 1.400 | |
| | Unearned Service Revenue | | 1.400 |

- The adjustment entry at the end of the period:

| | | <i>Dr.</i> | <i>Cr.</i> |
|--------|--------------------------|------------|------------|
| Dec 31 | Unearned Service Revenue | 800 | |
| | Service Revenue | | 800 |

Example

- December 1, Alpha Inc. received €2.000 from Beta Co. as advance payment of a two months rent:

| | | | |
|-------|-----------------------|-------|-------|
| Dec 1 | Cash | 2.000 | |
| | Unearned Rent-Revenue | | 2.000 |

- December 31:

| | | | |
|--------|-----------------------|-------|-------|
| Dec 31 | Unearned Rent-Revenue | 1.000 | |
| | Rent-Revenue | | 1.000 |

Example

- A firm that publishes a monthly magazine receives €240 for a 3 month subscription:

| | | | |
|---------|------------------|-----|-----|
| April 1 | Cash | 240 | |
| | Unearned Revenue | | 240 |

- At the end of each of the 3 months:

| | | | |
|-------|------------------|----|----|
| XX 31 | Unearned Revenue | 80 | |
| | Revenue | | 80 |

Adjustment for Unearned (Deferred) Revenues

Liability Account

Adjusting entry

Debit

Revenue Account

Adjusting entry

Credit

Unrecorded (*Accrued*) Expenses

- Expenses incurred but not yet paid in cash.

Expense Recorded

BEFORE

Cash Payment

- Accrued expenses often occur in regard to **Salaries, Interest, Taxes, Rent**

Accrued Expenses

- A firm pays its employee a monthly salary of €1.800, half on the 15th and half on the last day of the month.
- If a payday falls on a Sunday, the firm pays the employee on the following Monday.

Accrued Expenses

- During June, the firm pays its employees the first half-month salary of €900.

| | | | |
|---------|-------------------------|-----|-----|
| June 15 | Salary Expense | 900 | |
| | Cash | | 900 |
| | <i>Salaries payment</i> | | |

| Salary Expense | |
|----------------|---------|
| 900 | (15.06) |

| Cash | |
|------|---------|
| 900 | (15.06) |

Accrued Expenses

- Since the second half-month amount of €900 will be paid on Monday July 1, an adjusting entry is made on Sunday June 30.

| | | | |
|--------|------------------|-----|-----|
| Jun 30 | Salary Expense | 900 | |
| | Salaries Payable | | 900 |

| Salary Expense | |
|----------------|---------|
| 900 | (15.06) |
| 900 | (30.06) |

| Salary Payable | |
|----------------|---------|
| 900 | (30.06) |

Salaries

- Assume that the month ends on a Wednesday and you pay employees on Friday. Your employee receives €20 per day.
- Because the month ends on a Wednesday you will need to expense 3 days of payroll to be paid on Friday:

| | | | |
|--|----------------|----|----|
| | Salary Expense | 60 | |
| | Salary Payable | | 60 |

- On Friday the following transaction will take place when the payroll is paid:

| | | | |
|--|----------------|----|-----|
| | Salary Expense | 40 | |
| | Salary Payable | 60 | |
| | Cash | | 100 |

Tax Expenses

- The final adjusting entry of the period: accrue income tax expense and the related income tax payable.

| | | | |
|--------|--------------------|-----|-----|
| Dec 31 | Income Tax Expense | 600 | |
| | Income Tax Payable | | 600 |

| Income Tax Expense | |
|--------------------|---------|
| 600 | (31.12) |

| Income Tax Payable | |
|--------------------|---------|
| 600 | (31.12) |

Adjustment for Unrecorded (Accrued) Expenses

Liability Account

Adjusting entry
Credit

Expense Account

Adjusting entry
Debit

Unrecorded (*Accrued*) Revenues

- Revenue that has been earned but not yet collected is called an **accrued revenue**.

Revenue Recorded

BEFORE

Cash Receipt

- Accrued revenues often occur in regard to:
Services performed, Rent, Interest

Accrued Revenues

- Firm A will pay Firm B €600 monthly for the provision of services, with the first payment on January 15.
- During December, B will earn half a month's fee for work done Dec 15 to 30. On December 31, B makes the following adjusting entry:

| | | | |
|--------|---------------------|-----|-----|
| Dec 31 | Accounts Receivable | 300 | |
| | Service Revenue | | 300 |

| Accounts Receivable | |
|---------------------|---------|
| 300 | (31.12) |

| Service Revenue | |
|-----------------|---------|
| 300 | (31.12) |

Interest Revenue

- On 1 October 2016, a company provides services of €15.000 to a client.
- The client will not be able to pay for the services until 1 April 2017.
- The client signs a promissory note (receivable) for 6 months. The note bears 6% annual interest.
- The entry on 1 October 2016:

| | | | |
|--------|-----------------|--------|--------|
| Oct 01 | Note receivable | 15.000 | |
| | Service Revenue | | 15.000 |

- Interest is not recorded until time has passed and it has been earned.

Interest Revenue

- On 31 December 2012, the client now owes interest, but cash is not due until maturity date.
- The company has earned interest for 3 months (Oct, Nov, and Dec).

| | | | |
|--------|--|-----|-----|
| Dec 31 | Interest receivable (€15.000x6%x3/12) | 225 | |
| | Interest Revenue | | 225 |

Adjustment for Unrecorded (Accrued) Revenues

| Asset Account | |
|-----------------|--|
| Adjusting entry | |
| Debit | |

| Revenue Account | |
|-----------------|-----------------|
| | Adjusting entry |
| | Credit |

Example

- On 31 December, the end of the fiscal period, Alpha Inc. is about to prepare the adjusting entries:
 1. Supplies account shows beginning balance of €6.000. Purchases during the year were €10.300. The physical inventory at the end of the year shows Supplies on hand of €3.000.
 2. On Dec 1 the firm received an advance of €4.800 for services to be performed monthly for a year. The €4.800 was credited to Unearned Services Revenue.
 3. The firm has a note receivable. On December 31 the accrued interest on the note was €6.000.
 4. The payment of the employees salaries (€10.000) will be made on January 3.

The Adjusted Trial Balance

- Summarizes all accounts and their final balances after all adjusting entries have been journalized and posted.
- Source for the **preparation of the financial statements.**

Example

Journalize the adjusting entry needed at 31 December 2014 for each situation.

1. The business has interest expense of €1.200 that it must pay early in January 2015.
2. The unadjusted balance of the Supplies account is €3.200. The total cost of supplies on hand is €1.500.
3. Salary expense is €7.000 per day—Monday through Friday—and the business pays employees each Friday. This year, December 31 falls on a Wednesday.
4. On July 1, 2014, when the business collected €15.000 rent in advance, it debited Cash and credited Unearned Rent Revenue. The tenant was paying for one years' rent.
5. Interest revenue of €900 has been earned but not yet received.
6. Equipment was purchased at the beginning of this year at a cost of €50.000. The equipment's useful life is five years. There is no residual value. Record depreciation for this year.

Closing the Books

1. Close Revenues

- a. **Debit** all Revenue accounts
- b. **Credit** Retained earnings

2. Close Expenses

- a. **Debit** Retained earnings
- b. **Credit** all Expense accounts

3. Close Dividends

- a. **Debit** Retained earnings
- b. **Credit** Dividends

Example

Prepare the closing entries from the following selected accounts from Alpha Corporation at December 31, 2014:

| | |
|---|---------|
| • Cost of services sold | €28.600 |
| • Accumulated depreciation | 82.200 |
| • Selling, general, and administrative expenses | 12.800 |
| • Retained earnings, December 31, 2013 | 5.200 |
| • Service revenue | 63.800 |
| • Depreciation expense | 8.200 |
| • Interest revenue | 800 |
| • Dividends | 600 |
| • Income tax expense | 1.200 |
| • Accounts payable | 2.400 |

Example

- Close the Revenues

| | | | |
|--------|-------------------------|--------|--------|
| Dec 31 | Service Revenue | 63.800 | |
| | Interest Revenue | 800 | |
| | Retained Earnings | | 64.600 |
| | <i>Closing revenues</i> | | |

Example

- Close the Expenses

| | | | |
|--------|-------------------------|--------|--------|
| Dec 31 | Retained Earnings | 50.800 | |
| | Cost of Services Sold | | 28.600 |
| | SGA Expenses | | 12.800 |
| | Depreciation | | 8.200 |
| | Income Tax Expense | | 1.200 |
| | <i>Closing expenses</i> | | |

Example

- Close Dividends

| | | | |
|--------|--------------------------|-----|-----|
| Dec 31 | Retained Earnings | 600 | |
| | Dividends | | 600 |
| | <i>Closing dividends</i> | | |

After Closing the Accounts...

- The business is ready for the next accounting period!
 - The revenue, expense, and dividends accounts (temporary accounts) have zero balances.
 - Retained Earnings increased/decreased to reflect net income/loss.
 - The balance sheet accounts (permanent accounts) show the correct balances, which are carried forward to the next period, as shown in the **post-closing trial balance**.

Post Closing Trial Balance

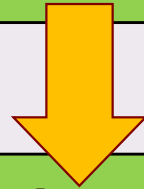
No Revenues/expenses accounts

Post Closing Trial Balance SuperStar Inc. 31 Dec 2016

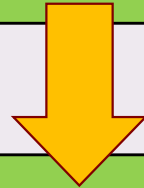
| | DEBIT | CREDIT |
|---|---------------|---------------|
| Cash | 22,480 | |
| Accounts Receivable | 5,000 | |
| Office Supplies | 3,660 | |
| Prepaid Rent | 1,600 | |
| Office Equipment | 16,320 | |
| Accumulated depreciation – Office Equipment | | 300 |
| Accounts Payable | | 6,280 |
| Unearned Revenue | | 600 |
| Salaries Payable | | 720 |
| Common Stock | | 41,160 |
| | <u>49,060</u> | <u>49,060</u> |

Flow of Accounting Data (1/2)

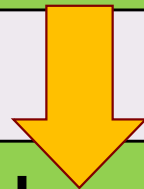
Transaction Occurrence



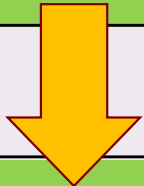
Transaction **Analysis**



Record to the Journal (*Journalize*)



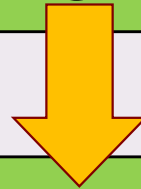
Post to the Ledger (*Posting*)



Prepare Unadjusted **Trial Balance**

Flow of Accounting Data (2/2)

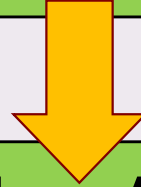
Adjust the Accounts



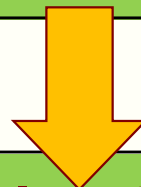
Prepare Adjusted Trial Balance



Prepare the Financial Statements



Close the Accounts



Prepare Post-Closing Trial Balance