


CHAPTER 2

ANALYZING CHANGES IN THE ACCOUNTING EQUATION

$$A = L + OE$$

Business Transaction - a financial event that affects assets, liabilities or owner's equity



simply means the event is expressed in terms of dollars or money

In Chapter 2 we will analyze changes in the accounting equation

TOPIC 1 - ANALYZING OPENING BUSINESS TRANSACTIONS

Balances as at September 30, 2010

| | | | | | | | | |
|---------------|-----------------|-----------|---------------------|---|----------------------|---------------------|---|-----------------------|
| ASSETS | | | | = | LIABILITIES | | + | OWNER'S EQUITY |
| Cash | Auto- mobile | Furniture | Office Equipment | = | Bank Loan Payable | Accounts Payable | + | J.Emery, Capital |
| \$60000 | + \$15000 | + \$8000 | + \$7000 | = | \$20000 | + \$10000 | + | \$60000 |
| \$ 90000 | | | | = | \$ 30000 | | + | \$60000 |

Transaction 1 - On October 1, 2010 J. Emery Real Estate buys more furniture for \$1000 from Enns Furniture Ltd., and pays by cheque

Note: only assets are affected by this transaction

| ASSETS | | | | = | LIABILITIES | | + | OWNER'S EQUITY |
|---------------|-----------------|---------------|---------------------|---|----------------------|---------------------|---|---------------------|
| Cash | Auto- mobile | Furniture | Office Equipment | = | Bank Loan Payable | Accounts Payable | + | J.Emery, Capital |
| \$60000 | + | \$15000 | + | | \$20000 | + | | \$60000 |
| + | | \$8000 | + | | | \$10000 | + | |
| + | | | \$7000 | = | | | | |
| <u>- 1000</u> | | <u>+ 1000</u> | | | <u>20000</u> | <u>10000</u> | | <u>60000</u> |
| 59000 | | 15000 | 9000 | = | | | | |
| | | | 7000 | | | | | |
| | | 90000 | | = | | 90000 | | |

Transaction 2 - On October 3, 2010 J. Emery Real Estate buys more office equipment valued at \$1200 this time from Ryan Equipment Co. on 60 days credit. In other words, the creditor allows 60 days for payment

Note: on the left side assets are affected and on the right side liabilities **OWNER'S**

| ASSETS | | | | = | LIABILITIES + EQUITY | | |
|--------------|-----------------|-------------|-----------------------|---|----------------------|------------------------|---------------------|
| Cash | Auto- mobile | Furniture | Office Equipment | = | Bank Loan Payable | Accounts Payable | J.Emery, Capital |
| \$59000 | + \$15000 | + \$9000 | + \$7000 | | \$20000 | + \$10000 | + \$60000 |
| <u>59000</u> | <u>15000</u> | <u>9000</u> | <u>+ 1200</u> 8200 | = | <u>20000</u> | <u>+ 1200</u> 11200 | <u>60000</u> |
| | 91200 | | | = | | 91200 | |

Transaction 3 - On October 4, 2010 J. Emery Real Estate returns one calculator costing \$200 from Ryan Equipment Co. because it arrived damaged

Note: on the left side assets are affected and on the right side liabilities

| ASSETS | | | | = | LIABILITIES + OWNER'S EQUITY | | |
|---------|---------|-----------|-----------|---|------------------------------|----------|----------|
| Cash | Auto- | Furniture | Office | | Bank Loan | Accounts | J.Emery, |
| \$59000 | mobile | \$9000 | Equipment | = | Payable | Payable | Capital |
| + | \$15000 | + | \$8200 | | \$20000 | + | \$60000 |
| + | | + | | | + | \$11200 | + |
| <hr/> | <hr/> | <hr/> | <hr/> | = | <hr/> | <hr/> | <hr/> |
| \$9000 | 15000 | 9000 | 8000 | | 20000 | 11000 | 60000 |
| | | 91000 | | = | 91000 | | |

Transaction 4 - On October 5, 2010 J. Emery Real Estate writes a cheque for \$5000 to Western Motors Ltd. in payment for the car Jane Emery purchased in September, when she established the business. Prior to this payment, Western Motors Ltd. held a claim against the assets of J. Emery Real Estate; the cheque therefore eliminates this claim.

Liability

Note: on the left side assets are affected and on the right side liabilities

| ASSETS | | | | = | LIABILITIES | | + | OWNER'S EQUITY |
|--------------|-------------------|-------------------|---------------------|---|----------------------|---------------------|-------------------|---------------------|
| Cash | Auto- mobile | Furniture | Office Equipment | = | Bank Loan Payable | Accounts Payable | + | J.Emery, Capital |
| \$59000 | + \$15000 | + \$9000 | + \$8000 | = | \$20000 | + \$11000 | + | \$60000 |
| <u>-5000</u> | <u> </u> | <u> </u> | <u> </u> | = | <u> </u> | <u>-5000</u> | <u> </u> | <u> </u> |
| 94000 | 15000 | 9000 | 8000 | = | 20000 | 6000 | + | 60000 |
| 86000 | | | | = | 86000 | | | |

Transaction 5 - On October 15, 2010 J. Emery Real Estate writes a cheque for \$4000 to the Royal Bank of Canada in partial payment of the bank loan.

Note: on the left side assets are affected and on the right side liabilities

| ASSETS | | | | = | LIABILITIES + EQUITY | | |
|-------------|---------|-----------|-----------|---|----------------------|----------|---------|
| Cash | Auto- | Furniture | Office | | Bank Loan | Accounts | OWNER'S |
| \$54000 | mobile | \$9000 | Equipment | = | Payable | Payable | Capital |
| + | \$15000 | + | \$8000 | | \$20000 | + | \$60000 |
| - | | | | = | - | | |
| <u>4000</u> | | | | | <u>4000</u> | | |
| 50000 | 15000 | 9000 | 8000 | | 16000 | 6000 | 60000 |
| | | | | = | | | |
| | | | 82000 | | | | 82000 |

Transaction 6 - On October 16, 2010 Jane Emery decides to increase her investment in the business by taking \$3000 from her personal savings account and depositing it into the firms bank account.

Note: on the left side assets are affected and on the right side owner's equity

investment ↓

| ASSETS | | | | = | LIABILITIES | | + | OWNER'S EQUITY |
|--------------|-----------------|--------------|---------------------|---|----------------------|---------------------|---|---------------------|
| Cash | Auto- mobile | Furniture | Office Equipment | = | Bank Loan Payable | Accounts Payable | + | J.Emery, Capital |
| \$50000 | + \$15000 | + \$9000 | + \$8000 | | \$16000 | + \$6000 | + | \$60000 |
| <i>+3000</i> | | | | | | | | <i>+3000</i> |
| <u>53000</u> | <u>15000</u> | <u>9000</u> | <u>8000</u> | = | <u>16000</u> | <u>6000</u> | | <u>63000</u> |
| | | <i>85000</i> | | = | <i>85000</i> | | | |

Transaction 7 - On October 30, 2010 Jane Emery withdraws \$2000 from her firms bank account and deposits it into her personal bank account.

Note: on the left side assets are affected and on the right side owner's equity

| ASSETS | | | | = | LIABILITIES | | | + | OWNER'S EQUITY | |
|---|-----------------|-----------|---------------------|---|----------------------|---------------------|---|---------------------|----------------|----------------------|
| Cash | Auto- mobile | Furniture | Office Equipment | = | Bank Loan Payable | Accounts Payable | + | J.Emery, Capital | - | J. Emery, Drawing |
| \$53000 | + \$15000 | + \$9000 | + \$8000 | = | \$16000 | + \$6000 | + | \$63000 | - | 2500 |
| <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;"> -2000 <u>51000</u> </div> <div style="text-align: center;"> <u>15000</u> </div> <div style="text-align: center;"> <u>9000</u> </div> <div style="text-align: center;"> <u>8000</u> </div> <div style="text-align: center;"> <u>16000</u> </div> <div style="text-align: center;"> <u>6000</u> </div> <div style="text-align: center;"> <u>61000</u> </div> </div> | | | | | | | | | | |
| 83000 | | | | = | 83000 | | | | | |

When the owner withdraws from the business it is recorded under a new subheading J. Emery, Drawing. Since the original investment has not decreased, we need a new item that will show a decrease in owner's equity, namely, drawings.

Drawings: decreasing owner's equity and resulting from the owner's withdrawal of assets for personal use.

Preparing a Summary Table

| SUMMARY TABLE | | | | | | | | | | | | |
|-------------------|-----------------|------------------|-----------------|------------------|---------------------------------|---------------------|-----------------|--------------------------------|----------------------|----------------------|-----------------------------|--|
| Trans- actions | ASSETS | | | | | = | LIABILITIES | | | + | OWNER'S EQUITY | |
| | Cash | Auto- mobile | Furni- ture | Office Equip. | Total or Change in Assets | Bk. Loan Payable | Accts. Pay. | Total or Change in Lias. | J. Emery, Capital | J. Emery, Drawing | Total or Change in OE | |
| (Orig. bal) | \$60 000 | +\$15 000 | +\$8 000 | +\$7 000 | +\$90 000 | \$20 000 | \$10 000 | \$30 000 | \$60 000 | | \$60 000 | |
| 1 | -1 000 | | +1 000 | | Ø | | | | | | | |
| 2 | | | | +1 200 | +1 200 | | +1 200 | +1 200 | | | | |
| 3 | | | | -200 | -200 | | -200 | -200 | | | | |
| 4 | -5 000 | | | | -5 000 | | -5 000 | -5 000 | | | | |
| 5 | -4 000 | | | | -4 000 | -4 000 | | -4 000 | | | | |
| 6 | +3 000 | | | | +3 000 | | | | +3 000 | | +3 000 | |
| 7 | -2 000 | | | | -2 000 | | | | | -2 000 | -2 000 | |
| Totals | \$51 000 | +\$15 000 | +\$9 000 | +\$8 000 | <u>\$83 000</u> | \$16 000 | +\$6 000 | <u>\$22 000</u> | \$63 000 | +\$2 000 | <u>\$61 000</u> | |

Equality Check: A = L + OE
 \$83 000 = \$22 000 + \$61 000
 \$83 000 = \$83 000

Topic 1 - Problems
P 2-1

Finish this for
Homework

OWNER'S
EQUITY

| | ASSETS | | | | = | LIABILITIES | | | + | OWNER'S EQUITY | | |
|------|--------|---------|--------|---------------------------|---|-------------------|---------------|--------------------------|---|-------------------|--------------------|------------------------|
| | Cash | Truck | Tools | Total or Change in Assets | | Bank Loan Payable | Accts Payable | Total or Change in Liab. | | G. Truer, Capital | G. Truer, Drawings | Total or Changes in OE |
| O.B. | \$6000 | \$15000 | \$4000 | \$25000 | | \$5000 | \$6000 | \$11000 | | \$14000 | | \$14000 |
| 1 | | | 3000 | 3000 | | | 3000 | 3000 | | | | |
| 2 | -4000 | | | -4000 | | | -4000 | -4000 | | | | |
| 3 | | | -400 | -400 | | | -400 | -400 | | | | |
| 4 | 1000 | | | 7000 | | | | | | 7000 | | 7000 |
| 5 | 8000 | | | 8000 | | 8000 | | 8000 | | | | |
| Ttl | 17000 | 15000 | 6600 | <u>38600</u> | | 13000 | 4600 | <u>17600</u> | | 21000 | | <u>21000</u> |

Equality Check:

$$A = L + OE$$

$$38600 = 17600 + 21000$$

$$38600 = 38600 \quad \checkmark$$

Topic 1 Problems Page 30 - 32

Topic 1 Mini-Cases Page 32 - 33

Nov. 1 - A licence was granted to Edna Greenwood for the organization and operation of Radio Station CHJK. Edna Greenwood invested \$80 000 cash.

Nov. 3 - Land was purchased for \$43 000 from Dwelling Development Company. A cash down payment of \$3 000 was made, and 90 days' credit extended.

Nov. 4 - A demand loan of \$30 000 was obtained from the Royal Bank of Canada.

Nov. 5 - A transmitter was purchased for \$55 000 from Radio Specialty, Ltd. A cash down payment of \$15 000 was made. The balance is to be paid in monthly instalments of \$500, beginning November 18.

Nov. 6 - An office and broadcasting facility was erected at a cost of \$68 000, paid in cash.

Nov. 8 - A used compact disc player was purchased for \$450 cash from Ferris Music Centre.

Nov. 11 - A tape recorder was purchased for \$1250 from Ferris Music Centre.

Nov. 14 - A compact disc library was purchased for \$5750 from Ferris Music Centre. A cash payment of \$1750 was made, with the balance to be paid within 30 days.

Nov. 16 - Part of the compact disc library, originally costing \$250, was sold to the Civic Recreation Centre for the same price. The Civic Recreation Centre made payment in full by cheque.

Nov. 18 - \$500 cash was paid to Radio Specialty, Ltd., as the first instalment due that day.

Nov. 30 - New compact discs were purchased from Ferris Music Centre for \$1125, to be paid within 30 days.

- a) Record the impact of each transaction on the accounting equation for this business enterprise by using the attached summary table with the following column headings: Transaction Date; Cash; Land; Building; Transmitter; Broadcasting Equipment; Compact Disc Library; Total Assets; Bank Loan Payable; Accounts Payable; Total Liabilities; Edna Greenwood, Capital.
- b) After recording the final transaction, total all columns in the table. Then check if the accounting equation is balanced.
- c) Prepare the opening balance sheet for Radio Station CHJK.

Key Check Figure: Total Liabilities is \$114 625

SUMMARY TABLE

| Tran. Date | ASSETS | | | | | | | = | LIABILITIES | | | OWNER'S EQUITY |
|---------------|---------------|---------------|---------------|---------------|---------------|-------------|------------------------|----------------|---------------|-----------------------------|-----------------------|----------------|
| | Cash | Land | Building | Transmitter | Broad. Equip. | CD Library | Change in Total Assets | Bank Loan Pay. | Acc. Payable | Change in Total Liabilities | E. Greenwood, Capital | |
| Nov. 1 | 80 000 | | | | | | +80000 | | | | 80 000 | |
| Nov. 3 | -3 000 | 43 000 | | | | | +40000 | | 40 000 | +40000 | | |
| Nov. 4 | 30 000 | | | | | | +30000 | 30 000 | | +30000 | | |
| Nov. 5 | -15 000 | | | 55 000 | | | +40000 | | 40 000 | +40000 | | |
| Nov. 6 | -68 000 | | 68 000 | | | | 0 | | | | | |
| Nov. 8 | -450 | | | | 450 | | 0 | | | | | |
| Nov. 11 | -1250 | | | | 1250 | | 0 | | | | | |
| Nov. 14 | -1750 | | | | | 5750 | +4000 | | 4 000 | +4000 | | |
| Nov. 16 | 250 | | | | | -250 | 0 | | | | | |
| Nov. 18 | -500 | | | | | | -500 | | -500 | -500 | | |
| Nov. 30 | | | | | | 1125 | +1125 | | 1125 | +1125 | | |
| Totals | 20 300 | 43 000 | 68 000 | 55 000 | 1 700 | 6625 | 194 625 | 30 000 | 84 625 | 114 625 | 80 000 | |

Equality Check: $A = L + OE$
 $194625 = 114625 + 80000$

- Nov. 1 - A licence was granted to Edna Greenwood for the organization and operation of Radio Station CHJK. Edna Greenwood invested \$80 000 cash.
- ③ Nov. 3 - Land was purchased for \$43 000 from Dwelling Development Company. A cash down payment of \$3 000 was made, and 90 days' credit extended. $43000 - 3000 = 40000$
- ① Nov. 4 - A demand loan of \$30 000 was obtained from the Royal Bank of Canada.
- ① Nov. 5 - A transmitter was purchased for \$55 000 from Radio Specialty, Ltd. A cash down payment of \$15 000 was made. The balance is to be paid in monthly instalments of \$500, beginning November 18. $40000 - 500 = 39500$
- Nov. 6 - An office and broadcasting facility was erected at a cost of \$68 000, paid in cash.
- Nov. 8 - A used compact disc player was purchased for \$450 cash from Ferris Music Centre.
- ① Nov. 11 - A tape recorder was purchased for \$1250 from Ferris Music Centre.
- ① Nov. 14 - A compact disc library was purchased for \$5750 from Ferris Music Centre. A cash payment of \$1750 was made, with the balance to be paid within 30 days. $5750 - 1750 = 4000$
- Nov. 16 - Part of the compact disc library, originally costing \$250, was sold to the Civic Recreation Centre for the same price. The Civic Recreation Centre made payment in full by cheque.
- ② Nov. 18 - \$500 cash was paid to Radio Specialty, Ltd., as the first instalment due that day.
- ② Nov. 30 - New compact discs were purchased from Ferris Music Centre for \$1125, to be paid within 30 days. 1125

Radio Station CHJK
Balance Sheet
as at November 30, 2016

| ASSETS | | | | LIABILITIES | | | |
|---------------------|----|--------------------|--|--|---------|--------------------|--|
| Cash | \$ | 20300.00 | | Bank Loan | \$ | 30000.00 | |
| Land | | 43000.00 | | Accounts Payable: | | | |
| Building | | 68000.00 | | Radio Specialty Ltd. | \$39500 | | |
| Transmitter | | 55000.00 | | Ferris Music Centre | 5125 | | |
| Broadcasting Equip. | | 1700.00 | | Dwelling Development | 640000 | 84625.00 | |
| CD Library | | 6625.00 | | <u>Total Liabilities</u> | | <u>\$114625.00</u> | |
| | | | | <u>OWNER'S EQUITY</u> | | | |
| | | | | E. Greenwood, Capital | | <u>80000.00</u> | |
| <u>Total Ass'ts</u> | | <u>\$194625.00</u> | | <u>Total Liabilities & Owners Equity</u> | | <u>\$194625.00</u> | |

Apr. 1 – Martha Whiting invested \$65 000 cash into her business.

Apr. 2 – She purchased land for \$17 000 from Superior Lots, Ltd. A cash down payment of \$4 500 was made, and 60 days' credit extended.

Apr. 3 – She took out a loan of \$42 000 on demand from the Bank of Montreal.

Apr. 5 - A tractor was purchased for \$32 000 from McIntosh Farms, Ltd. She made a down payment of \$6 250 cash on the tractor. The balance is to be paid in monthly instalments of \$750, beginning April 22nd.

Apr. 7 – The business built an office building for \$78 450. A mortgage of \$45 000 was taken out on the building. The remainder was paid in cash.

Apr. 9 – Various pieces of equipment were purchased for \$3 500 cash from Home Hardware.

Apr. 11 – Martha took \$3 000 out from the business's chequing account for personal use.

Apr. 15 - Tools were purchased for \$4 200 from Kent Building Supplies. A cash payment of \$1 300 was made, with the balance to be paid within 30 days.

Apr. 16 – A piece of equipment that was purchased from Home Hardware had to be returned. It cost \$625 and Home Hardware accepted the return.

Apr. 19 – Martha invested another \$10 000 into her business.

Apr. 22 – A cheque of \$750 was paid to McIntosh Farms, Ltd. as the first installment due that day.

Apr. 29 – New tools were purchased from Kent Building Supplies for \$650, to be paid within 30 days.

Key Check Figure: Total Liabilities is \$128 050

SUMMARY TABLE

ASSETS = LIABILITIES + OWNER'S EQUITY

| | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
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