

## Reporting of Cash Flows

### Purpose of the Statement of Cash Flows

- main purpose: to provide information enabling users to assess a company's ability to generate cash
  - as well as the company's needs in using these cash flows
- when used with other statements, it provides info about a companies investing and financing activities
- also useful in assessing a company's ability to generate future cash flows
- also enhances the comparability of different companies
  - it eliminates the accrual based effects of using different accounting treatments for similar transactions
- statement of cash flows is a required statement for publicly traded and private corporations

### Content of the Statement of Cash Flows

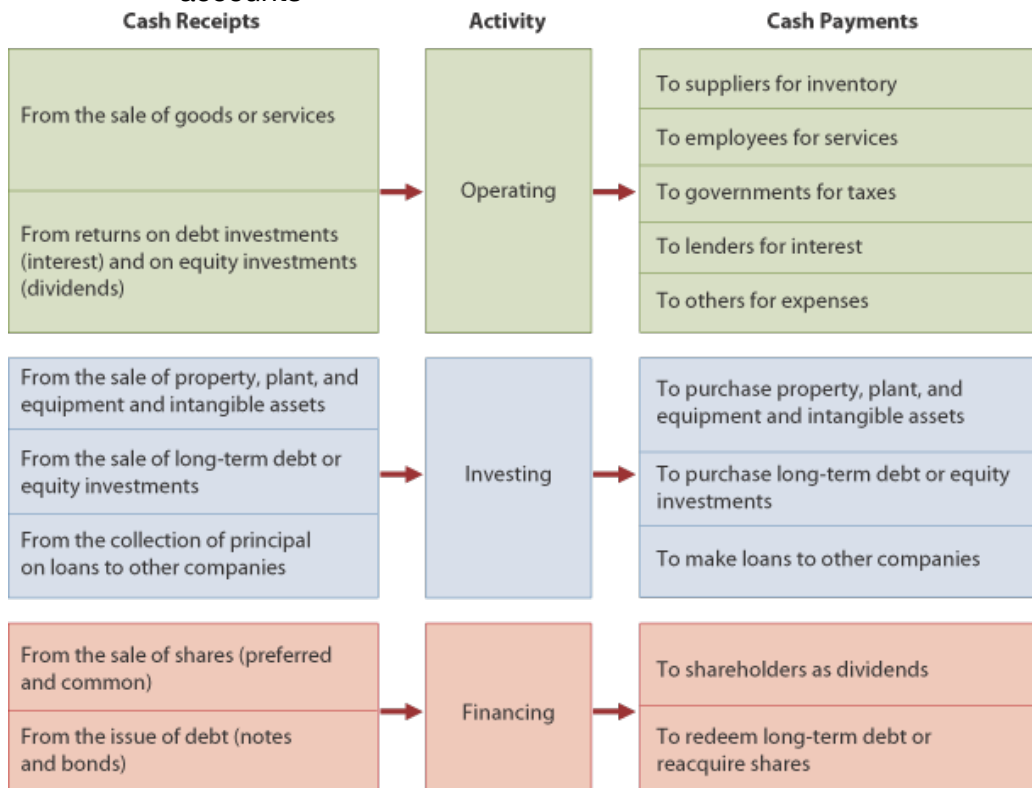
#### Definition of Cash

- **cash and cash equivalents**
  - cash equivalents are short term, highly liquid investments
    - are readily convertible to cash within a short period of time
    - debt investments due within three months

#### Classification of Cash Flows

- statement classifies cash receipts and cash payments into three types of activities
  - operating activities
  - financing activities
  - investing activities
- **operating activities** includes the cash effects of transactions that create revenues and expenses
  - affects profit
- **investing activities**
  - includes purchasing and disposing of investments and long lived assets
  - includes lending money and collecting loans

- generally affects non current asset accounts
- **financing activities**
  - includes obtaining cash from issuing debt and repaying amounts borrowed
  - includes obtaining cash from shareholders and paying them dividends
  - generally affects non current liabilities and shareholders' equity accounts



### Significant Non-cash Activities

- not all of a company's significant activities involve cash
- examples of non cash activities
  - issue of debt to purchase assets
  - issue of shares to purchase assets
  - conversion of debt into equity
  - exchange of property, plant and equipment
- **significant investing and financing activities that do not affect cash are not reported in the body of the statement of cash flows**
  - activities are reported in a note to financial statements

## Preparing the Statement of Cash Flows

COMPANY NAME Statement of Cash Flows Period Covered		
<b>Operating activities</b>		
(Prepared using indirect or direct method)	<u>XX</u>	
Net cash provided (used) by operating activities		XXX
<b>Investing activities</b>		
(List of individual inflows and outflows)	<u>XX</u>	
Net cash provided (used) by investing activities		XXX
<b>Financing activities</b>		
(List of individual inflows and outflows)	<u>XX</u>	
Net cash provided (used) by financing activities		<u>XXX</u>
<b>Net increase (decrease) in cash</b>		<u>XXX</u>
<b>Cash, beginning of period</b>		<u>XXX</u>
<b>Cash, end of period</b>		<u><u>XXX</u></u>

- covers the year ended
- separated into three sections
- two methods of making a statement of cash flows
  - direct
  - indirect
- both methods report a subtotal
  - net cash provided or used by the activity
- totalled to determine the net increase or decrease of cash in that period
- amount is added (if a net increase) or subtracted (if a net decrease) from the beginning of period cash balance
  - used to determine the end of period cash balance
- **end of period cash balance should correspond with the cash balance reported on the statement of financial position**
  - for that period
- where do we find information to prepare the statement of cash flows?
  - is not prepared from an adjusted trial balance
  - statement requires detailed information about changes in account balances that have occurred between two periods of time
- 3 sources to obtain the information
  - **comparative statement of financial position**
    - determines the amounts of the changes in assets, liabilities and shareholders' equity from the beginning of


the period to the end

- **income statement**

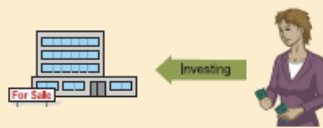
- related non cash current assets and current liability accounts from the statement of financial position
  - used to determine the amount of cash provided or used by O.A during the period

- **additional information**


- includes transaction data needed to determine how cash was used or provided during the period



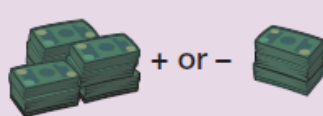
**Step 1: Prepare operating activities section.**  
Determine the net cash provided (used) by operating activities by converting profit from an accrual basis to a cash basis. To do this, analyze the current year's income statement, relevant current asset and current liability accounts from the comparative statement of financial position, and selected information.



**Step 2: Prepare investing activities section.**  
Determine the net cash provided (used) by investing activities by analyzing changes in non-current asset accounts from the comparative statement of financial position, and selected information.



**Step 3: Prepare financing activities section.**  
Determine the net cash provided (used) by financing activities by analyzing changes in non-current liability and equity accounts from the comparative statement of financial position, and selected information.



**Step 4: Complete the statement of cash flows.**  
Determine the net increase (decrease) in cash. Compare the net change in cash reported on the statement of cash flows with the change in cash reported on the statement of financial position to make sure the amounts agree.

COMPUTER SERVICES CORPORATION  
Statement of Financial Position  
December 31

	<u>2012</u>	<u>2011</u>	<u>Increase (Decrease)</u>
<u>Assets</u>			
Current assets			
Cash	\$ 55,000	\$ 33,000	\$ 22,000
Accounts receivable	20,000	30,000	(10,000)
Merchandise inventory	15,000	10,000	5,000
Prepaid expenses	5,000	1,000	4,000
Property, plant, and equipment			
Land	140,000	30,000	110,000
Building	160,000	40,000	120,000
Accumulated depreciation—building	(11,000)	(5,000)	6,000
Equipment	27,000	10,000	17,000
Accumulated depreciation—equipment	(3,000)	(1,000)	2,000
Total assets	<u>\$408,000</u>	<u>\$148,000</u>	
<u>Liabilities and Shareholders' Equity</u>			
<u>Liabilities</u>			
Current liabilities			
Accounts payable	\$ 28,000	\$ 12,000	16,000
Income tax payable	6,000	8,000	(2,000)
Non-current liabilities			
Bonds payable	130,000	20,000	110,000
<u>Shareholders' equity</u>			
Common shares	70,000	50,000	20,000
Retained earnings	164,000	48,000	116,000
Accumulated other comprehensive income	10,000	10,000	0
Total liabilities and shareholders' equity	<u>\$408,000</u>	<u>\$148,000</u>	

<b>COMPUTER SERVICES CORPORATION</b>		
<b>Income Statement</b>		
<b>Year Ended December 31, 2012</b>		
Sales revenue		\$507,000
Cost of goods sold		150,000
Gross profit		<u>357,000</u>
Operating expenses		
Other operating expenses	\$141,000	
Depreciation expense	9,000	
Loss on sale of equipment	3,000	153,000
Profit from operations		<u>204,000</u>
Other expenses and losses		
Interest expense		12,000
Profit before income tax		<u>192,000</u>
Income tax expense		<u>47,000</u>
Profit		<u><u>\$145,000</u></u>

Additional information for 2012:

1. The company uses a perpetual inventory system.
2. Assume that prepaid expenses relate to other operating expenses and accounts payable relate to purchases of merchandise inventory on account.
3. The company acquired land by issuing \$110,000 of long-term bonds.
4. Equipment costing \$25,000 was purchased for cash.
5. The company sold equipment with a carrying amount of \$7,000 (cost of \$8,000, less accumulated depreciation of \$1,000) for \$4,000 cash.
6. Depreciation expense consists of \$6,000 for the building and \$3,000 for equipment.
7. The company paid a \$29,000 cash dividend.
8. The bonds were issued at face value.
9. There was no other comprehensive income reported in 2012.

### Operating Activities

- profit should be converted from an accrual bases to cash basis
- **profit** is used for operating activities - not total comprehensive income
- two methods to convert profit to net cash provided or used by operating activities
  - indirect
  - direct
- **indirect method** converts total profit from an accrual basis to a cash basis
- **direct method** converts each individual revenue and expense account

from an accrual basis to a cash basis

- identifies specific cash receipts and payments
- **when using either method, you should arrive at the same net cash provided/used by operating activities**
- direct method is preferred
  - said to be more informative to users
  - easier to compare with other financial statements

Indirect Method		Direct Method	
Operating activities		Operating activities	
Profit	XX	Cash receipts from customers	XX
Adjustments to reconcile profit to net cash provided (used) by operating activities		Cash payments	
(List of individual adjustments)	XX XX	To suppliers	XX
Net cash provided (used) by operating activities	XX	For operating expenses	XX
		To employees	XX
		For interest	XX
		For income tax	XX XX
		Net cash provided (used) by operating activities	XX

### Step 1: Indirect Method

- first two adjustments
  - non-cash expenses and revenues
  - losses and gains
- last adjustment
  - increase or decrease in current assets and liabilities



### Non-Cash Expenses and Revenues

- even though depreciation expense reduces profit - does not reduce cash

Depreciation Expense	9,000	
Accumulated Depreciation—Building		6,000
Accumulated Depreciation—Equipment		3,000

- because there is no affect on cash, this must be **added back** to profit
  - to arrive at net cash provided or used by operating activities
- added to cancel the deduction that was created by the depreciation expense when profit was determined

Operating activities	
Profit	\$145,000
Adjustments to reconcile profit to net cash provided (used) by operating activities	
Depreciation expense	9,000

- like depreciation expense, amortization expense is added back to profit
- amortization of bond discounts and premiums
  - entry made by a bond issuer to amortize a bond discount results in
    - debit to Interest Expense
    - credit to the Bonds Payable account
- any portion of interest expense that is related to the amortization of a bond premium should be deducted from profit

#### Losses and Gains

- cash received from the sale of long lived assets should be reported in investing activities
- all losses and gains from investing activities must be elicited from profit to arrive at cash from operating activities
- sale of PPE recorded by:
  - recognizing the cash proceeds that are received
  - removing the asset and accumulated depreciation accounts from the books
  - recognizing any loss or gain on sale

Cash	4,000	
Accumulated Depreciation	1,000	
Loss on Sale of Equipment	3,000	
Equipment		8,000

- \$4,000 cash is considered as an investing activity
- selling equipment is not part of a company's primary activities
- in the above example, there is no cash inflow or outflow from operating activities
- to eliminate losses on the sale of an asset, add losses back on the statement of cash flows
- subtract gains

Operating activities	
Profit	\$145,000
Adjustments to reconcile profit to net cash provided (used) by operating activities	
Depreciation expense	9,000
Loss on sale of equipment	3,000

- increases in assets would be subtracted on the statement of cash flows
- decreases in assets would be added on the statement of cash flows
- increases in liabilities would be added on the statement of cash flows
- decreases in liabilities would be subtracted on the statement of cash flows
- losses and gains are possible when a debt is retired
  - process is the same
  - the other side of the transaction is recorded in financing activities not investing activities

#### Changes in Current Asset and Current Liability Accounts

- working capital = difference between current assets and liabilities

#### Changes in Current Assets

- increases in current asset accounts are deducted from profit
- decreases in current asset accounts are added to profit
- **Accounts Receivable**

		Accounts Receivable			
\$10,000 net decrease (add to profit) {	Jan.	1	Balance	30,000	
			Sales on account	507,000	Receipts from customers 517,000
	Dec.	31	Balance	20,000	

- **Merchandise Inventory**

		Merchandise Inventory			
} \$5,000 net increase (deduct from profit)	Jan.	1	Balance	10,000	
			Purchases	155,000	Cost of goods sold 150,000
	Dec.	31	Balance	15,000	

- **Prepaid Expenses**

		Prepaid Expenses			
} \$4,000 net increase (deduct from profit)	Jan.	1	Balance	1,000	
			Payments for expenses	145,000	Other operating expenses 141,000
	Dec.	31	Balance	5,000	

#### Changes in Current Liabilities

- increases in current liabilities are added to profit
- decreases in current liabilities are subtracted from profit
- **Accounts Payable**

- record the difference
- conversion of COGS on the accrual based income statement to the cash paid for goods purchased has two steps
  - change in Merchandise Inventory accounts adjusting the cost of goods sold to the accrual based COGS purchased
  - change in AP adjusts the accrual based COGP to the cash based payments to suppliers

		Accounts Payable			
\$16,000 net increase (add to profit) {		Jan.	1	Balance	12,000
	Payments to suppliers			Purchases	155,000
		Dec.	31	Balance	28,000

### • Income Tax Payable

		Income Tax Payable				} \$2,000 net decrease (deduct from profit)
		Jan.	1	Balance	8,000	
Payments for income tax	49,000			Income tax expense	47,000	
		Dec.	31	Balance	6,000	

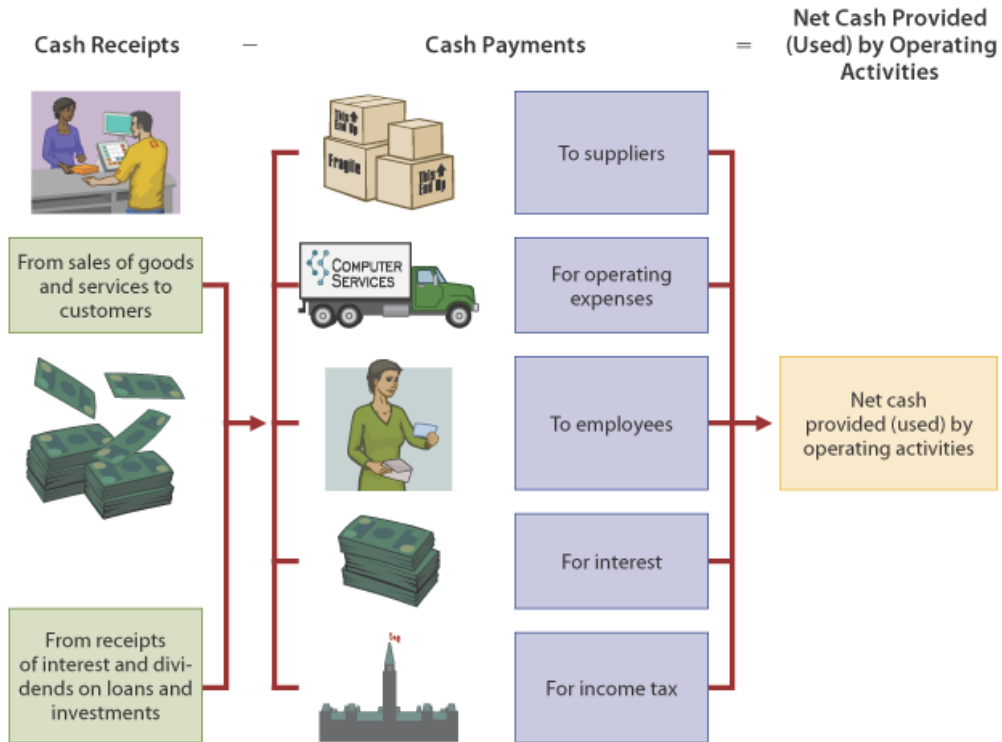
COMPUTER SERVICES CORPORATION	
Statement of Cash Flows—Indirect Method (partial)	
Year Ended December 31, 2012	
Operating activities	
Profit	\$145,000
Adjustments to reconcile profit to net cash provided (used) by operating activities	
Depreciation expense	\$ 9,000
Loss on sale of equipment	3,000
Decrease in accounts receivable	10,000
Increase in merchandise inventory	(5,000)
Increase in prepaid expenses	(4,000)
Increase in accounts payable	16,000
Decrease in income tax payable	(2,000)
Net cash provided by operating activities	172,000

Noncash expenses	Depreciation expense (property and equipment)	Add
	Amortization expense (intangible assets)	Add
	Amortization of a bond discount for a bond issuer (interest expense)	Add
	Amortization of a bond premium for a bond issuer (interest expense)	Deduct
Noncash revenues	Amortization of a bond discount for a bond investor (interest revenue)	Deduct
	Amortization of a bond premium for a bond investor (interest revenue)	Add
Losses and gains	Losses	Add
	Gains	Deduct
Changes in certain noncash current asset and current liability accounts	Increase in current asset account	Deduct
	Decrease in current asset account	Add
	Increase in current liability account	Add
	Decrease in current liability account	Deduct

## Section 2: Direct Method

- adjusting the income statement from the accrual basis of accounting to the cash basis of accounting

### Cash Receipts



### Cash Receipts from Customers

Cash receipts from customers	=	Revenue	{	+ Decrease in accounts receivable or - Increase in accounts receivable
\$517,000	=	\$507,000	+	\$10,000

### Cash Receipts from Interest

- if an income statement details other revenue -> interest revenue
  - amounts should be adjusted for any receivable amounts
- decreases in interest receivable would be added to interest revenue
- increases in interest receivable would be deducted from interest revenue

### Cash Payments

## Cash Payments to Suppliers

- **Cost of goods purchased**

- the cost of goods sold must be adjusted for any change in merchandise inventory
- merchandise inventory increases, cost of goods purchased is higher than the cost of goods sold
- decreases in inventory are deducted from the cost of goods sold

Cost of goods sold	\$150,000
Add: Increase in merchandise inventory	5,000
<b>Cost of goods purchased</b>	<b>155,000</b>

- **cash payments to suppliers**

- adjust the cost of goods purchased for the change in accounts payable
- increases in accounts payable are deducted from the cost of goods purchased
- if there were a decrease in accounts payable, cash payments to suppliers would have to be higher than purchases
  - decrease in AP is added to the cost of goods purchased

Cost of goods purchased (from [1] above)	\$155,000
Less: Increase in accounts payable	16,000
<b>Cash payments to suppliers</b>	<b>139,000</b>

Cash payments to suppliers	=	Cost of goods sold	+	{ + Increase in inventory or - Decrease in inventory	-	{ + Decrease in accounts payable or - Increase in accounts payable
\$139,000		\$150,000		\$5,000		\$16,000

## Cash Payments for Operating Expenses

Cash payments for operating expenses	=	Operating expenses	+	{ + Increase in prepaid expenses or - Decrease in prepaid expenses	+	{ + Decrease in accrued expenses payable or - Increase in accrued expenses payable
\$145,000		\$141,000		\$4,000		\$0

### Cash Payments to Employees

- must know salaries expense and salaries payable
- cash payments to employees = salaries expense {+ decrease / - increase salaries payable

### Cash Payments for Interest

- interest expense {+ decrease/ - increase interest payable = cash payments for interest
- the amortization of a bond premium reduces interest expense ins tease of reducing cash

### Cash Payments for Income Tax

Cash payments for income tax	=	Income tax expense	{	+ Decrease in income tax payable or - Increase in income tax payable
\$49,000	=	\$47,000	+	\$2,000

COMPUTER SERVICES CORPORATION		
Statement of Cash Flows (partial)		
Year Ended December 31, 2012		
Operating activities		
Cash receipts from customers		\$517,000
Cash payments		
To suppliers	\$(139,000)	
For operating expenses	(145,000)	
For interest	(12,000)	
For income tax	(49,000)	(345,000)
Net cash provided by operating activities		172,000

	Cash Receipts (Revenues)	Cash Payments (Expenses)
Current assets		
Increase in account balance	Deduct ( - )	Add ( + )
Decrease in account balance	Add ( + )	Deduct ( - )
Current liabilities		
Increase in account balance	Add ( + )	Deduct ( - )
Decrease in account balance	Deduct ( - )	Add ( + )

### Step 2: Investing Activities

- affects non current asset accounts
  - long term investments

- plant, property and equipment
- intangible assets
- investments that cash flows from the purchase and sale of long term investments are considered
  - investments in debt or equity securities of other companies are classified as operating activities
    - related to revenue producing activities
- short term notes receivables issued for loans rather than for trade transactions are classified as an investing activity

Land

- issuing bonds for land = no effect on cash
- is a noncash investing activity and financing activity
- should be issued as a note to the statement of cash flows

Building

- if not otherwise stated, we assume transactions are for **cash**
- example: building account increases for \$120,000 cash
- accumulated depreciation for building increases by \$6,000
  - results from \$9,000 of depreciation expense on income statement
- NOTE: look at income statement and additional information to gain this information
- because depreciation expense is a non cash charge it does not affect the statement of cash flows

Accumulated Depreciation—Building					
	Jan.	1	Balance	5,000	} \$6,000 net increase
			Depreciation expense	6,000	
	Dec.	31	Balance	11,000	

Equipment

- Computer Services' Equipment account increases by \$17,000
- net increase from:
  - purchase of equipment at \$25,000 cash
  - sale of equipment at \$8,000 for \$4,000 cash

Equipment	25,000	
Cash		25,000

Cash	4,000	
Accumulated Depreciation	1,000	
Loss on Sale of Equipment	3,000	
Equipment		8,000

Equipment			
Jan.	1	Balance	10,000
		Purchase of equipment	25,000
Dec.	31	Balance	27,000
		Cost of equipment sold	8,000

} \$17,000 net increase

- accumulated depreciation for equipment increases by \$2,000
  - reduction in accumulated depreciation of \$1,000 -> sale of equipment
  - increase in accumulated depreciation \$3,000

\$2,000 net increase {

Accumulated Depreciation—Equipment			
		Jan.	1
		Balance	1,000
		Depreciation expense	3,000
		Dec.	31
		Balance	3,000

### Investments

- items reported as investments should consist of amounts paid when purchasing long term investments and amounts received when selling long term investments
- purchases of items are subtracted
- sales of items are added
- typically do not see “cash provided by investing activities”
  - unless the company sells of excess assets

COMPUTER SERVICES CORPORATION		
Statement of Cash Flows (partial)		
Year Ended December 31, 2012		
Investing activities		
Purchase of building	\$(120,000)	
Purchase of equipment	(25,000)	
Sale of equipment	<u>4,000</u>	
Net cash used by investing activities		\$(141,000)
Note x: Significant noncash investing and financing activities		
Issue of bonds to purchase land		\$110,000

### Step 3: Financing Activities

- analyze changes in non current liabilities or equity accounts
- includes changes involving short term loans (notes) payable

## Bonds Payable

- account can increase or decrease due to the amortization of a bond discount or premium
- amortization of a bond discount **increases** the Bonds Payable Account
- the amortization of a bond premium **decreases** the Bonds Payable Account
- amortization does not affect cash
  - must be considered when analyzing changes in the account before determining the amount of bonds purchased or sold during the period

## Share Capital

- can include preferred and common shares
- example: \$70,000 common shares at the end of 2012, increased by \$20,000
  - assumption that the change related to the issue of additional common shares for cash
  - cash inflow from issue of shares -> reported in the financing activities section of the statement of cash flows
- if company reacquired shares
  - amount of cash paid to reacquire > reported as a cash outflow in the financing activities section

## Retained Earnings

- increase in retained earnings:
  - profit increased retained earnings by \$145,000
  - cash dividend of \$29,000
- use the formula to determine amounts:
  - $BI + \text{profit (-loss)} - \text{dividends} = EI$

\$116,000 net increase {	Retained Earnings					
			Jan.	1	Balance	48,000
	Cash dividend	29,000			Profit	145,000
			Dec.	31	Balance	164,000

## Accumulated Other Comprehensive Income

- if accumulated other comprehensive income increased or decreased
  - does not have an affect on the statement of cash flows
- as company's grow
  - expect: cash provided by financing activities

COMPUTER SERVICES CORPORATION		
Statement of Cash Flows (partial)		
Year Ended December 31, 2012		
Financing activities		
Issue of common shares	\$20,000	
Payment of cash dividend	<u>(29,000)</u>	
Net cash used by financing activities		\$(9,000)
Note x: Significant noncash investing and financing activities		
Issue of bonds to purchase land		\$110,000

#### Step 4: The Statement of Cash Flows

COMPUTER SERVICES CORPORATION		
Statement of Cash Flows		
Year Ended December 31, 2012		
Operating activities		
Cash receipts from customers		\$517,000
Cash payments		
To suppliers	\$(139,000)	
For operating expenses	(145,000)	
For interest	(12,000)	
For income tax	<u>(49,000)</u>	
Net cash provided by operating activities		172,000
Investing activities		
Purchase of building	\$(120,000)	
Purchase of equipment	(25,000)	
Sale of equipment	<u>4,000</u>	
Net cash used by investing activities		(141,000)
Financing activities		
Issue of common shares	\$ 20,000	
Payment of cash dividend	<u>(29,000)</u>	
Net cash used by financing activities		(9,000)
Net increase in cash		22,000
Cash, January 1		<u>33,000</u>
Cash, December 31		<u>\$ 55,000</u>
Note x: Significant noncash investing and financing activities		
Issue of bonds to purchase land		\$110,000

#### Using Cash Flows to Evaluate a Company

- includes cash based ratios

	2010	2009
Net cash provided by operating activities	\$ 2,743	\$ 2,983
Net capital expenditures	810	590
Cash dividends	118	0
Current assets	3,306	3,676
Total assets	29,209	29,873
Current liabilities	1,740	2,363
Total liabilities	13,033	15,282

### Liquidity

- **liquidity** the ability of a company to pay obligations expected to become due within the next year
- disadvantage of the current ratio: uses year end balances of current assets and current liabilities
  - year end balances may not be representative of a company's position during most of the year
  - numbers are accrual based numbers
- correcting this problem: cash current debt coverage
- **cash current debt coverage**= NET CASH PROVIDED(USED) BY OPERATING ACTIVITIES / AVERAGE CURRENT LIABS

CASH CURRENT DEBT COVERAGE = $\frac{\text{NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES}}{\text{AVERAGE CURRENT LIABILITIES}}$		
(in millions)	Cash Current Debt Coverage Ratio	Current Ratio
Teck	$\frac{\$2,743}{(\$1,740 + \$2,363) \div 2} = 1.3 \text{ times}$	$\frac{\$3,306}{\$1,740} = 1.9:1$
Freeport-McMoRan	1.9 times	2.6:1

### Solvency

- **Solvency** the ability of a company to survive over the long term
- Cash Total Debt Coverage
- **cash total debt coverage** = NET CASH PROVIDED(USED) BY OPERATING ACTIVITIES/ AVERAGE TOTAL LIABS
  - indicated a company's ability to repay its liabilities from cash generated by its operating activities

- higher the ratio, the more solvent a company is

CASH TOTAL DEBT COVERAGE = $\frac{\text{NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES}}{\text{AVERAGE TOTAL LIABILITIES}}$		
(in millions)	Cash Total Debt Coverage Ratio	Debt to Total Assets
Teck	$\frac{\$2,743}{(\$13,033 + \$15,282) \div 2} = 0.2 \text{ times}$	$\frac{\$13,033}{\$29,209} = 44.6\%$
Freeport-McMoRan	0.4 times	50.5%

### Free Cash Flow

- helps creditors and investors understand how much discretionary cash flow a company has left from its operating activities
- **free cash flow** = NET CASH PROVIDED(USED) BY O.A. - NET CAPITAL EXPENDITURES - DIVIDENDS PAID
- net capital expenditures: amount paid for the acquisition of PPE - recoveries from the sale of assets

FREE CASH FLOW =	NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES	-	NET CAPITAL EXPENDITURES	-	DIVIDENDS PAID
(in millions)	2010		2009		
Teck (in CAD millions)	$\$2,743 - \$810 - \$118 = \$1,815$		$\$2,983 - \$590 - \$0 = \$2,393$		
Freeport-McMoRan (in USD millions)	\$3,881		\$2,581		