

Accounting ... More than Just Numbers



PCC Conference

Presented by:

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Your Facilitator

Richard Wong, CPA

- Instructor, Accounting and Tax at BCIT, Douglas College, and UBC
- Be prepared for dad jokes and puns!



Example of Bad Jokes

Did you hear about the big paddle sale at the boat store?

It's quite an oar-deal...



About BCIT



- Post-secondary institution focused on practical learning with campuses in Vancouver, Burnaby, Richmond, North Vancouver, and Delta.
- Nearly 50,000 students strong.

BCIT School of Business + Media

- Over 100 programs and 300 courses from accounting to finance to marketing to digital arts.
- Variety of full-time and part-time offerings.



Accounting for the Non-Accountant

- FMGT 1152/2152 – Accounting for Management
 - Recording business transactions.
 - Interpreting and preparing financial statements.
 - Budgeting and forecasting,
 - Tools for quantitative decision-making (i.e. outsourcing, purchasing equipment, etc.)



Today...



Sneak Peak of “Accounting for Management”

Agenda

- What is accounting and why is it important?
- Introduction to the Financial Statements
- Why is it important to have a basic understanding of the financial statements?
- Ratio Analysis
- Forecasting

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What is 'accounting'?

- the process of identifying, measuring and communicating economic information to permit informed judgements and decisions by users of the information'



Why should I care about accounting?

Accounting has often been referred to as “the language of business” because it”:

- Measures and records business activities
 - Converts this data into useful reports
- Communicates/interprets these results to key decision makers.

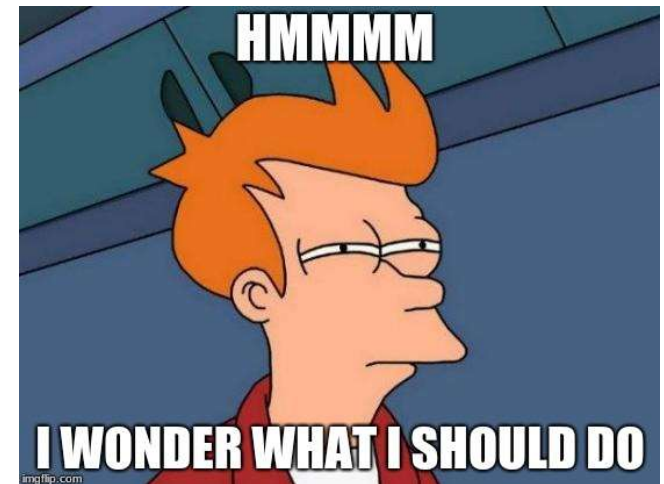


You have to understand accounting and you have to understand the nuances of accounting. **It's the language of business**

- Warren Buffett, CEO Berkshire Hathaway

Why do we recommend basic financial knowledge for a non-accountant?

- As a supervisor/manager/employee, you are a part of a business.
- You are responsible for planning, decision making, and control in whatever area you work in.
- Without a solid understanding of accounting, it can be difficult to communicate business impacts and make good decisions!



But I'm not in accounting...

Almost all decisions have costs and numbers attached to them!

- The better that you understand the language that is accounting, the better you can help manage your company's finances and assess its financial health.



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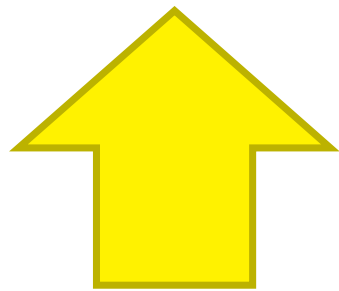
Financial Statements

- Accounting produces financial statements.
- Financial Statements are the business documents that companies use to report the results of their activities to various user groups.
- Report a business' financial position, operating performance, cash flows, and more.
- This is done in the for-profit and not-for-profit space.

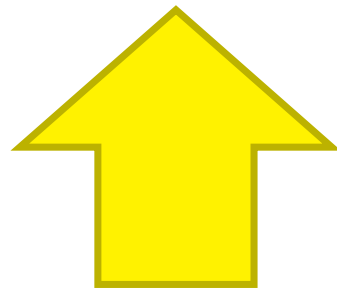
What are the types of financial statements in the for-profit space?

A complete set of financial statements includes:

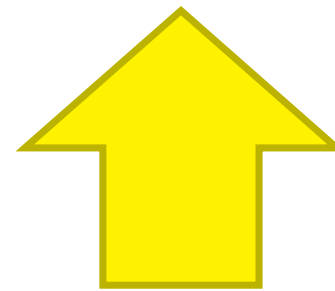
Income Statement	Statement of Changes in Equity	Balance Sheet	Statement of Cash Flow
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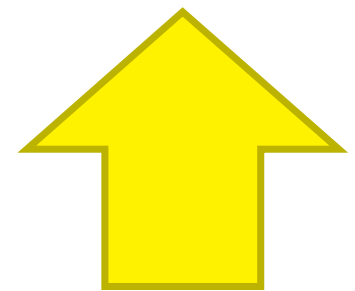
How well did the company perform during the year?



Why did the company's shareholders' equity change during the year?



What is the company's financial position (assets, liabilities, etc.) at the end of the year?

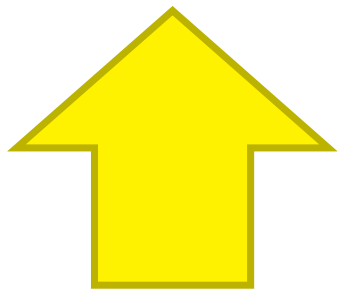


What happened to the company's cash during the year?

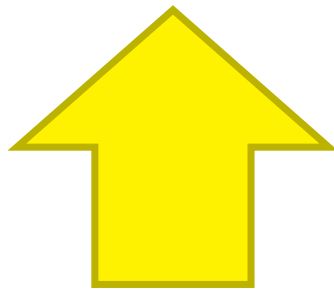
What are the types of financial statements in the non-profit space?

A complete set of financial statements includes:

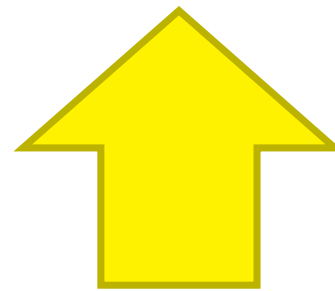
Statement of Operations	Statement of Changes in Net Assets	Balance Sheet	Statement of Cash Flow
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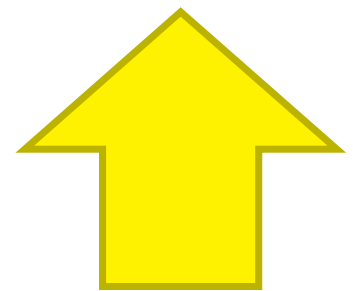
How well did the company perform during the year?



Why did the company's net assets change during the year?



What is the company's financial position (assets, liabilities, etc.) at the end of the year?



What happened to the company's cash during the year?

The Income Statement (For-Profit) Statement of Operations (Not-for-Profit)

- $\text{Income} - \text{Expenses} = \text{Net Income}$
- Also called the statement of profit and loss or statement of comprehensive income.
- Shows the “bottom line”
 - For-Profit: Net income / Profit
 - Not-for-profit: Excess of Revenues Over Expenses



The Income Statement (For-Profit)

Income Statement

How About That
Income Statement

For the Year Ended December 31, 2021

Revenues	\$XX,XXX
- Cost of goods sold	<u>(XX,XXX)</u>
- Selling, general, and administrative expenses	<u>(XX,XXX)</u>
- Interest expense	<u>(XX,XXX)</u>
- Income tax expense	<u>(XX,XXX)</u>
= Net Income	<u>\$XX,XXX</u>

Statement of Operations (Not-for-Profit)

	Endowment	
	2021	
REVENUES		
Investment Income (loss):		
Vancouver Foundation (Note 7)	\$ -	\$
Investment income (loss) (Note 4)	6,646	
Donations	-	
Other income (Note 5)	-	
Total Revenues	\$ 6,646	\$
EXPENSES		
Educational Funding:		
Doctoral support program (Note 5)	\$ -	\$
Scholarships and bursaries	-	
Funding to research universities	-	
Events	-	
Total Educational Funding Expenses	\$ -	\$
Audit and legal	-	
Investment fee	-	
Administration	-	
Total Expenses	\$ -	\$
Excess (deficiency) of Revenue over Expenses	\$ 6,646	

BRITISH COLUMBIA
INSTITUTE OF TECHNOLOGY

REVENUES
Membership fees
Business operations - Bookings and rentals <i>[schedule 1]</i>
Pub contract
Student events
Other
Interest
Advertising - Graduate Handbook
EXPENSES
Salaries and benefits
Executive honoraria
Student events and special projects
Office, telephone and network access
Council, committees, and conferences
Professional fees
Rent
Dues, licenses and subscriptions
Amortization of capital assets
Business operations - Bookings and rentals <i>[schedule 1]</i>
Repairs and maintenance
Departmental organization fund
Advertising and promotion
Donations
Photocopy rentals and supplies
Printing - Graduate Handbook
Excess of revenue (expenses) for the period

Statement of Changes in Equity (For-Profit) Statement of Changes in Net Assets (Not-For-Profit)

- Shows changes in the equity or “net assets” of a company.
 - Positive addition indicates revenues exceeded expenses

Statement of Changes in Equity (For-Profit)

Statement of Changes in Net Assets (Not-For-Profit)

	Unrestricted
Net assets, beginning of year	\$ 5,237
Excess of revenue over expenses	5,153
Remeasurement and other items relating to employee future benefits	(6,645)
Endowment contributions	—
Interfund transfers	8,557
Net assets, end of year	\$ 12,302

	Invested in Capital Assets
	\$
May 31, 2015 <i>[5 months] [note 11]</i>	
Balance, beginning of year	79,044
Excess of revenues (expenses) for the period	(11,941)
Investment in capital assets	11,662
Interfund transfers	—
Balance, end of year	78,765
December 31, 2014 <i>[12 months]</i>	
Balance, beginning of year	87,150
Excess of revenues (expenses) for the year	(29,424)
Investment in capital assets	21,318
Interfund transfers	—
Balance, end of year	79,044

The Balance Sheet

- $\text{Assets} = \text{Liabilities} + \text{Shareholders' Equity}$
- Also called the Statement of Financial Position
- Reports at a point in time, the:
 - Assets
 - Liabilities
 - Shareholders' Equity (For-Profit) / Net Assets (Not-for-Profit)

What is an “Asset”?

- Resource controlled by an entity.
- Result of past events.
- Future benefits/value.

Cash

Accounts Receivable

Inventory

Property

Equipment

Debt Owed to Us

Prepaid Expenses

What is a “Liability”?

- Present obligation of the company.
- Result of past events.
- Settlement involves outflow of resources.

Accounts Payable

Bank Loans

Note Payable

Debt We Owe to Others

Unearned Revenue

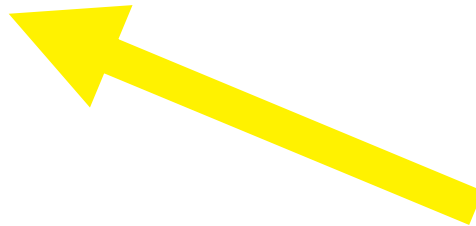
What is “S/H Equity”? (For-Profit)

Difference between total assets and total liabilities.

Common Shares

Preferred Shares

Retained Earnings



Beg. R/E + Net income – Dividends = Ending R/E

What are “Net Assets” (Not-for-Profit)?

Difference between total assets and total liabilities.

- Not-for-profits do not have shareholders.
- “The amount that is available for the organization to use in the future to continue to operate and achieve its goals”

The Balance Sheet (For-Profit)

Balance Sheet

Bread Pitt

Balance Sheet
as at December 31, 2018

Assets

Current Assets

Cash

Inventory

Non-Current Assets

Building

Equipment

Total Assets

Liabilities

Current Liabilities

Accounts Payable

Non-Current Liabilities

Long-Term Loans

Shareholders' Equity

Common Shares

Retained Earnings

Total Liabilities and Shareholders' Equity

The Balance Sheet (Not-For-Profit)

	May 31, 2015 \$
ASSETS	<i>[note 11]</i>
Current	
Cash	206,151
Short-term investments <i>[note 3]</i>	186,463
Accounts receivable <i>[note 4]</i>	86,302
Prepaid expenses	16,041
	494,957
Capital assets <i>[note 5]</i>	78,765
	573,722
LIABILITIES AND NET ASSETS	
Current liabilities	
Accounts payable and accruals <i>[note 6]</i>	64,712
Deferred revenue	535
	65,247
NET ASSETS	508,475
	573,722

	2021
ASSETS	
Current Assets	
Cash	\$ 60,787
Accounts receivable	5,441
Accounts receivable from related party (Note 8)	13,511
Doctoral support receivable (Note 5)	10,000
Short term investments (Note 2)	100,000
	189,739
Investments (Note 3)	3,558,182
Doctoral support receivable (Note 5)	20,000
Donated shares (Note 9)	111,591
	\$ 3,879,512
LIABILITIES	
Current Liabilities	
Accounts payable and accrued liabilities	\$ 6,784
Accounts payable to related party (Note 8)	22
	6,806
NET ASSETS	
Externally restricted (Note 6)	
Endowment	85,516
Scholarships and bursaries	153,180
Internally restricted (Note 6)	1,859,366
Unrestricted	1,774,644
	3,872,706
	\$ 3,879,512

The Statement of Cash Flows

- Measures cash receipts and cash payments
- Shows whether cash increased or decreased during the year
- Reports ending cash as shown on the balance sheet
- Categorizes into three types of activities:
 - Operating activities (running the business)
 - Investing activities (purchasing resources)
 - Financing activities (obtaining funds)

Notes to the Financial Statements

- Integral part of the financial statements
- Should be read carefully with the financial statements.
- Provide information on the accounting policies used

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Why are financial statements important?

- Shows stakeholders that the company has acted in their best interest.



Users/Stakeholders of Accounting Information

Managers /
Supervisors /
Executives (Make
Business Decisions)

Investors /
Shareholders
(Potential / Future)

Creditors (Will they
get their money
back?)

Government
and Regulatory
Bodies
(i.e. CRA, IRS)

Suppliers
(Do they want to do
business with a
company?)

3 Functions of Accounting

1. Scorekeeping

- Tracking and recording financial performance.

2. Attention directing

- Drawing attention of managers to and interpreting business performance.

3. Problem solving

- Identify the best choice between alternatives.

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Interpreting Financial Statements



You learned the different types of financial statements.

How do you analyze them?

Horizontal Analysis

Study of percentage changes from year-to-year (i.e. what % has revenue increased/decreased by).

Two steps:

1. Compute dollar amount of change.
2. Divide dollar amount of change by prior year amount

Horizontal Analysis - Example

Ferry Impressive Comparative Income Statements Years Ended May 2, 2021 and May 3, 2020				
	2021	2020	\$ Change	% Change
Sales	\$23,929	\$20,958	\$2,971	14.2%

STEP 1

- Compute the dollar amount of change in sales from 2020 to 2021:

2021 – 2020 = Increase

\$23,929 – \$20,958 = \$2,971

Horizontal Analysis - Example

Ferry Impressive
Comparative Income Statements
Years Ended May 2, 2021 and May 3, 2020

	2021	2020	\$ Change	% Change
Sales	\$23,929	\$20,958	\$2,971	14.2%

STEP 2

- Divide the dollar amount of change by the prior year amount. This computes the percentage change for the period:

$$\$2,971 / \$20,958 = 14.2\%$$

Trend Percentages

Form of horizontal analysis

Base year selected and set equal to 100%

- Amount of each following year stated as a percent of base

$$\boxed{\text{Trend \%}} = \frac{\boxed{\text{Any year}}}{\boxed{\text{Base year}}}$$

Trend Percentages

$$\text{Trend \%} = \text{Any year \$} \div \text{Base year \$}$$

	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010*</u>
Operating income	\$552	\$463	\$460	\$433	\$279
	198%	166%	165%	155%	100%
*2010 is the base year					

Vertical Analysis

Shows relationship of a financial-statement item to its base

- For Income Statement, total revenue is the base
- For Balance Sheet, total assets or liabilities + shareholders' equity / net assets is the base

$$\boxed{\text{Vertical analysis\%}} = \frac{\boxed{\text{Each income statement item}}}{\boxed{\text{Total revenue}}}$$

OR

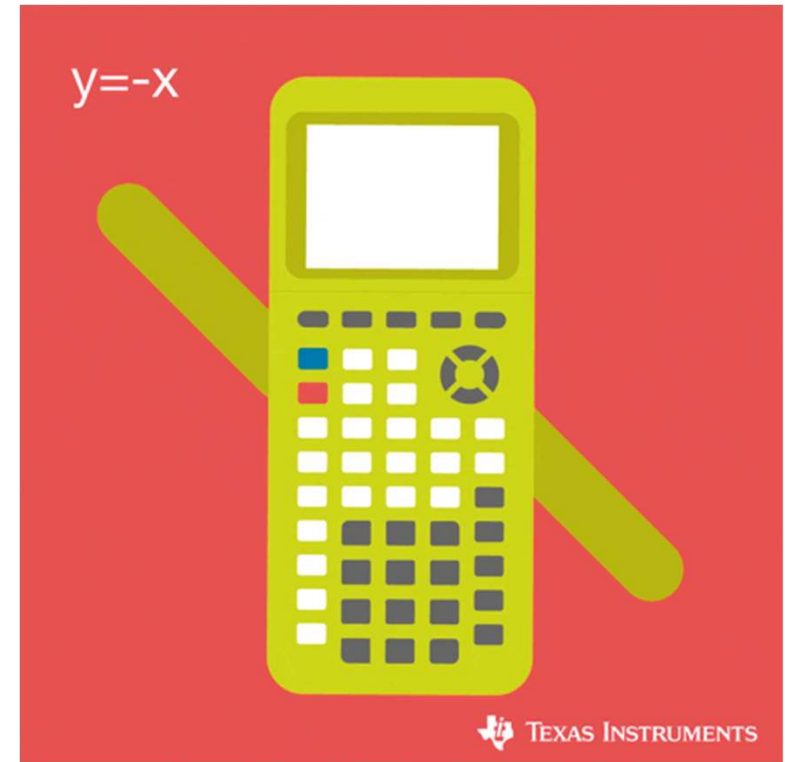
$$\frac{\text{Each balance sheet item}}{\text{Total assets or total liabilities + equity/net assets}}$$

Vertical Analysis - Example

	A	B	C	D	E	F
1	Empire Company Limited Consolidated Statements of Earnings (Adapted) For the Years Ended May 2, 2015 and May 3, 2014					
2	<i>(in millions of dollars)</i>	2015		2014		
3		Amount	Percentage of Sales	Amount	Percentage of Sales	
4	Sales and other revenue	\$ 24,114.1	100.0%	\$ 21,057.3	100.0%	
5	Operating expenses					
6	Cost of sales	17,966.7	74.5	15,941.3	75.7	
7	Selling & administrative expenses	5,403.8	22.4	4,787.5	22.7	
8	Operating income	743.6	3.1	328.5	1.6	
9	Finance costs, net	156.3	0.6	133.2	0.6	
10	Earnings before income taxes	587.3	2.4	195.3	0.9	
11	Income taxes	150.4	0.6	36.3	0.2	
12	Net earnings from continuing operations	\$ 436.9	1.8	\$ 159.0	0.8	
13	Net earnings from discontinued operations	\$0.0	0.0	\$84.4	0.4	
14	Net earnings	\$ 436.9	1.8	\$ 243.4	1.2	
15						

Financial Ratios

- Ratios are a major tool of financial analysis
- A ratio expresses the relationship between various types of financial information.



Ratio Analysis

Three Types of Comparisons

A **single ratio** by itself is **not very meaningful**.

We will use the following types of comparisons.

1. **Intracompany comparisons** (Comparisons to past years of a company)
2. **Industry average comparisons** (Comparisons to industry information)
3. **Intercompany comparisons** (Comparisons to competitors)

Ratio Categories

Liquidity

Measure short-term ability of the company to pay its maturing obligations and to meet unexpected needs for cash

Working capital

Current ratio

Times interest
earned

Working Capital

$$\boxed{\begin{array}{c} \text{Working} \\ \text{capital} \end{array}} = \boxed{\begin{array}{c} \text{Current} \\ \text{assets} \end{array}} - \boxed{\begin{array}{c} \text{Current} \\ \text{liabilities} \end{array}}$$

- Measures the ability to pay current liabilities with current assets
- Larger working capital = better ability to pay debts.

Current vs. Non-Current

- Assets and liabilities are classified as current or non-current.

Asset is classified as current asset when:

- Expected to realize, sell, or consume it in its normal operating cycle or within 1 year
- The asset is cash or a cash equivalent

How to Manage Working Cap.

- Receivables, through effective credit approval, invoicing, and collection activity
- Inventory, through effective ordering, storage, and identification of inventory
- Payables, by negotiation of trade terms and through taking advantage of prompt-payment discounts
- Cash, by effective forecasting, short-term borrowing, and/or investment of surplus cash where possible

Current Ratio

$$\boxed{\begin{array}{c} \text{Current} \\ \text{ratio} \end{array}} = \boxed{\begin{array}{c} \text{Current} \\ \text{assets} \end{array}} \div \boxed{\begin{array}{c} \text{Current} \\ \text{liabilities} \end{array}}$$

- Measures the ability to pay current liabilities with current assets.
- Higher = stronger financial position (But may be sitting on too many current assets).
- Norm for companies in most industries is 1.5.

Good Signs

Liquidity

- Improvements are the result of changing the balance between current assets and current liabilities
- May be improved by long-term borrowing
- Repaying long-term debt will reduce liquidity (uses cash – current asset)

Red Flags in Financial Statement Analysis

- Decreased cash flow
- Too much debt
- Inability to collect receivables
- Buildup of inventories
- Trends of sales, inventory and receivables

Limitations of the Ratios

- Business decisions are made in a world of uncertainty
- *A ratio may indicate something is wrong (Attention-directing), but not specifically what is wrong or how to correct it!*
- Users of financial statements must evaluate data on all ratios in light of other information
- Ratios should be analyzed *over a period of several years*



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What is forecasting?

Forecasting is the process of estimating, predicting, and modelling future business performance.

- A strong financial forecast will accurately predict the financial results of a company for a future period.
- Organizations rely on forecasts as calculated predictions that help executives and management determine how best to allocate their resources (such as staff, equipment, or cash) and to plan for expenses.

Financial Forecasts...

Regardless of the size or type of organization, financial forecasts:

- Are **regularly updated** (either on a monthly, quarterly, or annual basis).
- Are **updated** to reflect changes in operations, business plans, or external factors (i.e. declining demand, customers lost to competitors, etc.)
- Can be produced for a **short-term** (1 year and under) or **long-term** period (more than 1 year).
- Are used by company management to take **immediate, proactive** action before a period begins.



Be Careful!!



- Forecasts rely heavily on assumptions and calculated predictions made and are therefore valid for as long as the assumptions and calculated predictions hold true.
- For example, if you prepare a forecast with a 5% growth in sales on an annual basis, the forecast will only be accurate so long as sales continue to grow by 5% per year.

Forecasting in Real Life

Forecasting often occurs in our daily lives without us being aware of it!



How do We Forecast?

- Prepare pro-forma financial statements!
- Pro-forma financial statements are similar to the financial statements with one key difference: they are for **future** months, quarters, or years.

Pro-Forma Balance Sheet

WOODEN IT BE LOVELY			
PRO-FORMA BALANCE SHEET			
Assets	2020 (actual)	2021 (forecast)	2022 (forecast)
Cash	\$18,600	\$37,200	\$55,800
Accounts receivable	\$5,400	\$10,800	\$16,200
Inventory	\$1,400	\$2,800	\$4,200
Equipment	\$63,000	\$126,000	\$189,000
Total assets	\$88,400	\$176,800	\$265,200
Liabilities			
Accounts payable	\$1,100	\$2,200	\$3,300
Unearned revenue	\$1,000	\$2,000	\$3,000
Notes payable	\$2,300	\$4,600	\$6,900
Total liabilities	\$4,400	\$8,800	\$13,200
Shareholder's equity			
Common shares	\$52,000	\$104,000	\$156,000
Retained earnings	\$32,000	\$64,000	\$96,000
Total shareholder's equity	\$84,000	\$168,000	\$252,000

Pro-Forma Statement of Cash Flows

WOODEN IT BE LOVELY			
PRO-FORMA STATEMENT OF CASH FLOWS			
	2020 (actual)	2021 (forecast)	2022 (forecast)
Cash flows from operating activities			
Net income	\$50,000	\$100,000	\$150,000
Add: depreciation expense	\$10,000	\$20,000	\$30,000
Cash provided (used) in operating activities	\$60,000	\$120,000	\$180,000
Cash flows from investing activities			
Proceeds from sale of equipment	\$500,000	\$0	\$200,000
Purchases of equipment	\$0	(\$150,000)	\$0
Cash provided (used) in investing activities	\$500,000	(\$150,000)	\$200,000
Cash flows from financing activities			
Borrowings of long-term debt	\$200,000	\$100,000	\$150,000
Dividends paid to company's shareholders	(\$50,000)	(\$100,000)	(\$150,000)
Cash provided (used) in financing activities	\$150,000	\$0	\$0
Net increase/decrease in cash	\$710,000	(\$30,000)	\$380,000
Cash at the beginning of the year	\$100,000	\$810,000	\$780,000
Cash at the end of the year	\$810,000	\$780,000	\$1,160,000

How to Prepare Pro-Forma Financial Statements

1. Obtain Past Financial Statements. >

2. Determine How Long You Wish to Forecast For. >

3. Decide What You Will Base Your Future Forecast or Projections On. >

4. Prepare Pro-Forma Financial Statements. >

1. Obtain Past Financials

- Serve as a starting point.



2. Determine Forecast Period

Can be short-term (up to a year in advance) or long-term (beyond a one-year period).

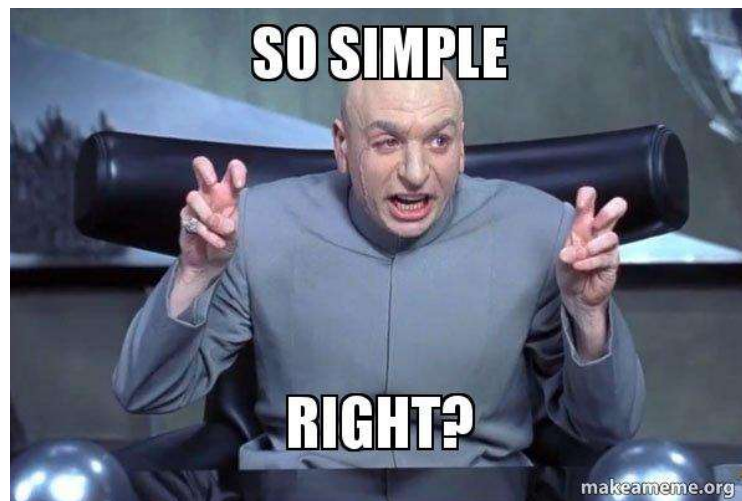


3. Pick Base for Future Forecast

- Make a calculated prediction of future sales. Lots of options:
 - Historical Forecasting (Educated guess based on historical periods).
 - Research-Based (Look at consumers and trends)
 - Moving Approaches to Data (Average of last few months, quarters, or years)
 - Expert Opinions
 - Executive Opinions

4. Prepare Pro-Formas

1. Pro-Forma Income Statement
2. Pro-Forma Balance Sheet
3. Pro-Forma Statement of Cash Flows



Warnings and Caveats

- Forecasts are rarely perfect.
- No single tool is best
- The shorter the time frame, the more accurate your forecast. It is difficult for a company to accurately predict its results in 1 month or 2 months, let alone 2 years or 5 years. It is up to you how often you wish to forecast. However, shorter time frames tend to be more accurate. It is rumoured that Walt Disney used to forecast on a daily basis!

Closing Remarks

- Accounting is the 'language of business' and is essential for decision making.
- Accounting produces financial statements, which are used to hold management accounting to stakeholders.
- Ratio analysis can be used to interpret financial statements.
- Forecasting relies on **calculated predictions** that help executives and management determine how best to allocate their resources

Questions?

