Financial Accounting Recitation 1

MIT Sloan School of Management

Finance at MIT
Where ingenuity drives results

Main goal of this class

- Learn how to use relevant accounting information to make better business decisions (e.g., investments, mergers, risk management, etc.)

- NOT to prepare you to become full-fledged accountants

Tips

Put some extra effort at the beginning to understand key concepts.

Take advantage of recitations, but also use your time wisely!

Homework and practice.

Recitation 1 Plan

Key Concepts:

- Accrual Accounting & Financial Statements
- Recording Transactions Using the BSE
- Practice!

Financial Statements

Balance Sheet

- A snapshot of the financial position of a business
- How much cash did Facebook have as of Dec 31^{st} 2013?

Income Statement

- Accounting performance of a company over a period of time
- Was Facebook profitable during 2013?

Statement of Cash Flows

- Sources and uses of cash
- Did Facebook generate enough cash to cover its expenses during 2013?

Stockholders' Equity

- Evolution of Shareholders' equity in the company.

Financial Statement Linkages

The Balance Sheet (B/S) is the ‘parent’ statement. All other financial statements flow to the B/S.

statement of cash

Statement of Cash Flows 12/31/20X4-12/31/20X5 (in millions)		
Operating activities	$	11.5
Investing activities	$	(92.8)
Financing activities	$	(14.7)
Net increase in cash	$	10.0
Beginning cash	$	30.0
Ending cash	$	40.0

income statement

Income Statement, 12/31/20X4-12/31/20X5		
Net sales	$	1,530.0
Expenses	$	1,434.5
Net income	$	95.5

statement of equity

Statement of Shareholders’ equity 12/31/20X4 - 12/31/20X5		
Retained earnings, 12/31/20X4	$	439.2
Net income	$	95.5
Dividends	$	36.7
Retained earnings, 12/31/20X5	$	498.0

Balance Sheet, 12/31/20X5		
Cash	$	40.0
All other assets	$	1,284.0
	$	1,324.0
	$	632.0
Liabilities	$	194.0
Capital Stock	$	1,324.0
Retained Earnings	$	498.0

Four Important Equations

- **Assets = Liabilities + Stockholders' Equity**

- **Net Income = Revenues - Expenses + Gains - Losses**

- Ending Cash = Beginning Cash + Net Cash Flow

- Ending Retained Earnings = Beginning Retained Earnings + Net Income - Dividends

Accrual Accounting

Cash Accounting

- Transactions are recorded ONLY when cash is exchanged.

Accrual Accounting

- Transactions are recorded based upon revenue recognition and matching principles (economic events / estimation)

In this class, we will focus on **accrual** accounting

An Example

Ted's apartment costs $1,000 each month to rent. He decides he doesn't want to worry about forgetting to pay his rent and pays his landlord $12,000 for the upcoming year.

Under Cash Accounting, how much expense?

$12,000

Under Accrual Accounting, how much expense?

$1,000 Accrual accounting recognizes expense only when the service is provided.

Which seems more accurate?

Principles of Accrual Accounting

Accrual accounting attempts to measure ***firm performance*** in a particular period regardless of when cash is exchanged

Revenue Recognition Intuition:

- Earnings process substantially complete (Earned)
- Cash collection reasonably assured (Collectible)

Matching Principle for Expenses:

- Recognize expenses in same period as associated revenue

An accrual is the recognition of revenues and expenses, regardless of when cash is received

Revenue Recognition

The Revenue Recognition Intuition says that revenue is recorded when the earnings process substantially complete (i.e. when you **earn** it)

Note that this definition makes no mention of when the cash is collected.

Under accrual accounting, we can record revenues (and expenses) even if no cash changes hands.

Matching Principle

The Matching Principle states that we should match all expenses to their associated revenues.

Note that this definition requires us to match all expenses associated with revenue, both those that have occurred and those that **will occur** in the future!

- This requires estimating future expenses

Why do we do this?

- To make financial statements more timely and to obtain better measures of profitability.

The Balance Sheet

Within the balance sheet we find three **classifications**:

- Asset
- Liability
- Equity

Within each of these classifications, we have separate **accounts**

The Balance Sheet

Cash

Accounts Receivable

Inventory

Prepaid Expenses

Etc.

We will learn more about each as the course goes on.

XYZ COMPANY
Balance Sheet
12/31/2017

ASSETS	
Current Assets:	
Cash	$12,000
Accounts Receivable	35,000
Inventory	120,000
Prepaid Rent	8,000
Total Current Assets	$175,000
Long-Term Assets	
Land	$126,000
Buildings & Improvements	300,000
Furniture & Fixtures	50,000
General Equipment	125,000
Total Fixed Assets	$601,000
TOTAL ASSETS	**$776,000**
LIABILITIES	
Current Liabilities:	
Accounts Payable	$60,000
Taxes Payable	25,000
Salaries/Wages Payable	30,000
Interest Payable	25,000
Total Current Liabilities	$140,000
Long Term Liabilities:	
Loan 1	$322,000
Total Long Term Liabilities	$322,000
TOTAL LIABILITIES	**$462,000**
OWNER'S EQUITY	
Paid in Capital	$64,000
Retained Earnings	250,000
TOTAL OWNER'S EQUITY	**$314,000**
TOTAL LIABILITIES & OWNER'S EQUITY	**$776,000**

The Balance Sheet Equation (BSE)

The BSE is a method of recording transactions (events)

Identify the accounts that are affected

Increase (or decrease) the affected accounts

Note that the equation must balance at all times (if it doesn't, you have made a mistake!)

Balance Sheet Equation (BSE)

Assets	=	Liabilities	+	Shareholder’s Equity
+ −				
+		+		
+				+
−		−		

Brady's Lawn Care

Brady's Lawn Care was founded on January 1, 2009. The company's founder, Tom, provides ongoing maintenance and gardening services for his clients in the summer and snow removal in the winter.

During the first fiscal year of operations, Tom engaged in the transactions listed on the following pages.

Transaction 1

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On January 1, 2009, Tom issued 100,000 shares of common stock to friends and family for $15 each in order to raise money to start his business.

Assets	=	Liabilities	+	Equity
Cash	=			Common Stock
1,500,000	=			1,500,000

Transaction 2

On January 1st, Tom also borrowed $100,000 @ 6% interest from Independent Bank for some additional capital.

Assets	=	Liabilities	+	Equity
Cash	=	Loans Payable		
100,000	=	100,000		

Transaction 3

On January 1st, Tom paid $500,000 cash for vehicles and lawn equipment

Assets		=	Liabilities	+	Equity
Cash	Equipment	=			
(500,000)	500,000	=			

Transaction 4

On April 14, Tom purchased some inventory, including fertilizer and plants for his first big clients, for $300,000.

Assets		=	Liabilities	+	Equity
Cash	Inventory	=			
(300,000)	300,000	=			

Transaction 5

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On April 21st, Tom billed his clients for the spring planting services, totaling $300,000   Collectability is reasonable

Tom had used $75,000 worth of plants and other supplies for these services.

Assets		=	Liabilities	+	Equity
Accounts Receivable	Inventory	=			Retained Earnings
300,000		=			300,000 (Revenue)
	(75,000)	=			(75,000) (COGS)

matching principle, this cost is incurred as revenue is recognized

Putting It All Together

Assets = Liabilities + Shareholder's Equity

	Cash	A/R	Inv.	Equip	Loan Payable	Common Stock	R/E
(1)	$1,500,000					$1,500,000	
(2)	100,000				100,000		
(3)	-500,000			500,000			
(4)	-300,000		300,000				
(5)		300,000					300,000 (rev)
(5)			-75,000				-75,000 (cogs)
	800,000	300,000	225,000	500,000	100,000	1,500,000	225,000

Used for Balance Sheet

Used for Income Statement

Income Statement

Revenue	$300,000
-Cost of goods sold (COGS)	$75,000
= **Gross profit (subtotal)**	$225,000
- Other Expenses	$0
= **Net income (or loss)**	**$225,000**

Balance Sheet

MIT MANAGEMENT SLOAN SCHOOL

Assets		**Liabilities**	
Cash	$800,000	Loans Payable	$100,000
Inventory	$225,000	**Total Liabilities**	**$100,000**
Accts Receivable	$300,000		
Equipment	$500,000		
		Shareholder’s Equity	
		Common Stock	$1,500,000
		Retained Earnings	$225,000
		Total Equity	**$1,725,000**
Total Assets	**$1,825,000**	**Total L+E**	**$1,825,000**

Recording Accrued Interest Expense #1

On January 1st, Tom also borrowed $100,000 @ 6% interest from Independent Bank for some additional capital.

Assets	=	Liabilities	+	Equity
Cash	=	Loans Payable		
100,000	=	100,000		

Recording Accrued Interest Expense #2

On December 31, Tom records interest expenses for the $100,000 loan @ 6% interest from Independent Bank. No cash payment is made.

Since Tom didn't make any cash payments yet, liabilities would increase because interest is what Tom owes to the bank

Assets	=	Liabilities	+	Equity
Cash	=	Accrued Interest		Interest Expense
	=	6,000		-6,000

shareholders' equity decreases by $6,000.

accrued but not paid: liability increase and equity decrease