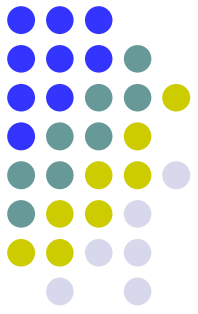


Receivables and Revenue Recognition



15.511 Corporate Accounting
Summer 2004

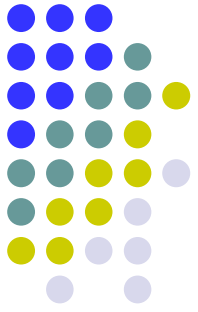
Professor SP Kothari

Sloan School of Management
Massachusetts Institute of Technology

June 21, 2004

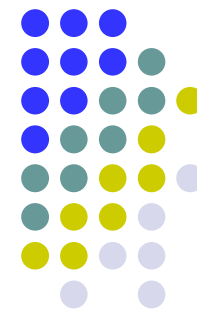


Why do we care about revenue recognition?



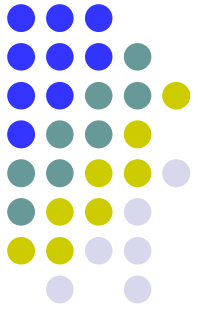
- Revenue has a **BIG** impact on bottom-line profitability ==> managers may be tempted to manage revenue
- **Large Sample Evidence: over 40% of SEC enforcement actions on accounting issues deal with Revenue Recognition**

Criteria for revenue recognition

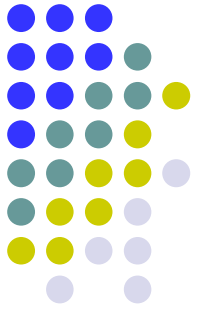


- Under accrual accounting, a firm recognizes revenue when it has:
 - Delivered goods and the title is transferred to the buyer
 - Performed all, or a substantial portion of, the services to be provided.
 - Incurred a substantial majority of the costs, and the remaining costs can be reasonably estimated.
 - Received either cash, a receivable, or some other asset for which
 - a reasonably precise value can be assigned
 - collectibility is reasonably assured.
- Guidance on revenue recognition in SAB 101 (Details to those interested on the next slide)

Some Details of SAB 101



- Fuelled by recent accounting scandals
- Issued by SEC: SAB 101 took effect in calendar year 2000.
- In general, SEC said that the most common reasons for changes in revenue recognition policies to comply with SAB 101 were:
 - Deferral of revenue on product sales until such products are delivered, and title transfers to the customer.
 - Deferral of various up-front, or prepaid, fees for which the company had not completed a separate earnings process.
 - Deferral of revenue until certain non-perfunctory seller obligations (such as equipment installation) were completed.
 - Deferral of revenue that is contingent on the occurrence of some future event (such as the achievement by a lessee of certain minimum sales thresholds) until that event occurs.
- Did the SEC over-react with SAB 101? Altamuro, Jennifer, Anne Beatty, and Joseph Weber. “Motives for Early Revenue Recognition: Evidence from SEC Staff Accounting Bulletin (SAB) 101.” 1 August 2002.



Cash Basis vs Accrual Basis

Recognition Criteria

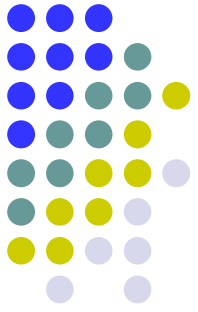
Accrual

Cash



Revenue

Expense



Cash Basis vs Accrual Basis

Recognition Criteria

Accrual

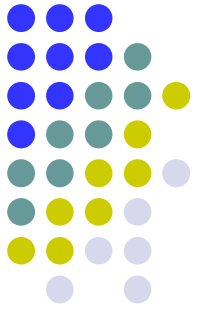
Cash

Revenue

when \$ rec'd

Expense

when \$ paid



Cash Basis vs Accrual Basis

Recognition Criteria

Accrual

Cash

Revenue

**when earned
and realized**

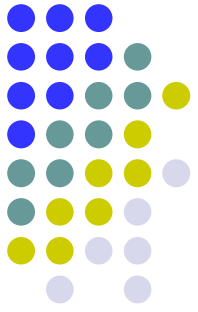
when \$ rec'd

Expense

when incurred

when \$ paid

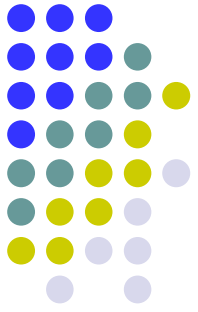
Examples of revenue recognition events (common cases)



- **At the time of sale**

- Title passes to the buyer and delivery takes place
- Reasonable estimate of uncollectibles
- Reasonable estimate of sales returns
- Reasonable estimation of all other material expenses representing uncertain future outflows (e.g., warranty costs).
- Most common in retail, wholesale & manufacturing
 - Even when right of return exists?

Revenue manipulation: Bill & Hold



- Hardware
 - Revenue from hardware sales or sales-type leases is recognized **when the product is shipped.**
- Recent experience of Sunbeam

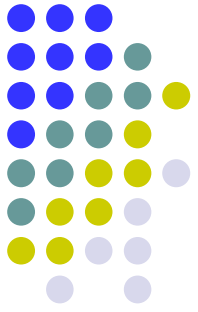
“.... In the fourth quarter of last year Sunbeam recorded \$50 million in sales of cooking grills under an ‘early buy’ program ... some \$35 million were categorized ‘bill and hold’ sales and never even left Sunbeam’s warehouses.”

-- Laing, Jonathan R. “Dangerous Games: Did “Chainsaw Al” Dunlap Manufacture Sunbeam’s Earnings Last Year?” Barron’s, 8 June 1998, 17.
- Agco Corp – SEC investigating their accounting practices

“Agco stated that in some instances it recognizes revenue when equipment remains on its premises after having been invoiced to the dealer. These transactions occur at a dealer’s request, added Agco, usually so the dealer can arrange for its own transportation of the equipment.”

-- Taub, Stephen. “SEC Digs Into Agco’s Accounting.” CFO.com, 6 February 2004, http://www.cfo.com/article/1,5309,12099%7C%7CT%7C121,00.html?f=TodayInFinance_Inside (accessed July 9, 2004).

Is this accounting manipulation? – channel stuffing & price discounts



- **Sunbeam**

“... Sunbeam jammed as many sales as it could into 1997 to pump both the top and bottom lines. ... Sunbeam either *sent more goods than had been ordered* by customers or shipped goods even after an order had been cancelled. ...”

-- Laing, Jonathan R. “Dangerous Games: Did “Chainsaw Al” Dunlap Manufacture Sunbeam’s Earnings Last Year?” Barron’s, 8 June 1998, 17.

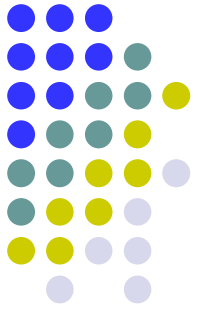
- **Recent experience of Bristol-Myers Squibb Co.**

- SEC investigating “whether it *improperly inflated revenue last year by as much as \$1 billion through use of sales incentives...* Drug makers, like many other manufacturers, can *boost near-term sales by extending lower prices* to wholesalers, encouraging them to load up. But such “channel-stuffing” hurts later sales.”

-- Harris, Gardiner. “Bristol-Myers Faces Inquiry By SEC Into Revenue Problem.” The Wall Street Journal, 12 July 2002, B6.

- **Systematic evidence:** Roychowdhury, Sugata. “Management of Earnings through the Manipulation of Real Activities that Affect Cash Flow from Operations.” MIT Sloan School of Management working paper, 25 November 2003, <http://ssrn.com/abstract=477941> (last accessed July 9, 2004)

Examples of revenue recognition events (Uncommon cases)



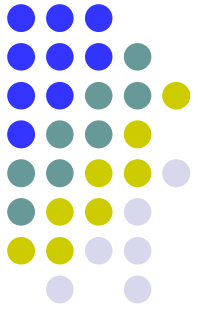
- **During production**

- Establishment of firm contract price
- Reasonable assurance of collection
- Reasonable estimate of cost of completion
- E.g., defense and construction contracts.

- **At Completion of Production**

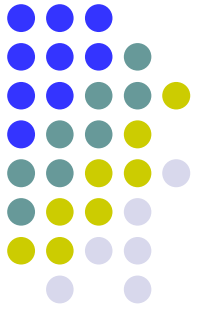
- Existence of deterministic or stable selling price
- No substantial cost of marketing
- E.g., precious metals, agricultural products

Examples of revenue recognition events (Uncommon cases)



- **At the time of cash collection**
 - Impossible to value assets received with fair degree of accuracy.
 - E.g., some real estate land development deals.
- **Installment approach**
 - Profits recognized in proportion to cash collected
- **Cost recovery approach**
 - No profit recognized until all the costs have been recovered.

Nuts & Bolts Hardware - sales

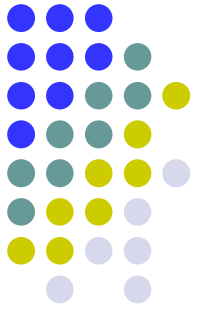


- Its Year 1: Nuts & Bolts makes sales of microwave ovens for \$ 10,000
- Say customers paid \$4,000 for these purchases with cash, the rest with their Nuts & Bolts credit cards

• So

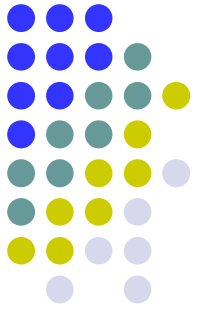
Dr Cash	4,000	
Dr Accounts receivables	6,000	
Cr Revenue		10,000

Nuts & Bolts Hardware - receivables



- When Nuts & Bolts makes its credit sales, it estimates from past experience that 5% of its accounts receivables will never be collected
- What does this imply?
- What are its accounts receivables actually worth?
- What is the part of the sale it will actually see?
- One option: Nuts & Bolts recognizes an expense of \$300 and writes *down* its accounts receivable to \$ 5,700

Dr	Bad Debt expense	300	
	Cr	Accounts Receivable	300



Nuts & Bolts Hardware - ADA

- Problem – what does Nuts & Bolts *not* know? – Specific accounts
- It therefore recognizes Bad Debt expense and creates an Allowance for Doubtful Accounts (ADA)

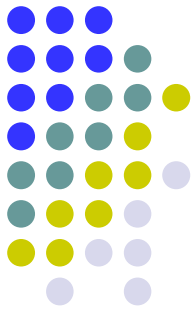
Dr	Bad Debt expense	300	
	Cr ADA		300

- On Balance Sheet, accounts receivable are reported net of ADA

<i>Accounts Receivables</i>	<i>6,000</i>
<i>less ADA</i>	<i>0,300</i>
<i>Net Accounts Receivable</i>	<i>5,700</i>

- ADA is a contra-asset account!

Income Statement and Balance Sheet Relations



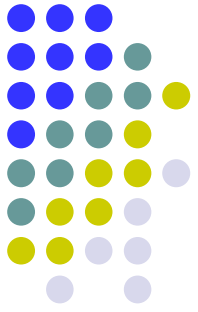
Accounts Receivable (A)

Beg Balance = 0 Credit Sales = 6,000	
Ending balance = 6,000	

Allowance for doubtful accounts (XA)

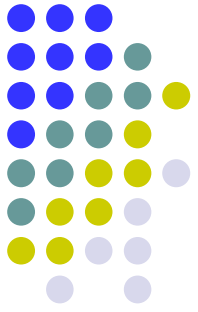
	Beg Balance = 0 Amount of Bad Debt Expense = 300
	Ending balance = 300

Nuts & Bolts Hardware – write-offs



- Its Year 2 end of quarter 1: For simplicity, assume no credit sales during quarter 1 of Year 2
- Customers have paid up \$ 3,000
- **Dr** Cash 3,000
 - **Cr** Accounts receivables 3,000
- Also, Customer Smith declares bankruptcy & defaults for \$50
- Nuts & Bolts has now identified a customer who has defaulted: It can write off Smith's Account Receivable
- Of the original \$300 Nuts & Bolts had expected to see as a default, what is the amount it still expects to never recover in the future?
- Which account should reflect this?
- **Dr** ADA 50
 - **Cr** Accounts receivables 50

Income Statement and Balance Sheet Relations



Accounts Receivable (A)

Beg Balance = 6,000

Cash collection = 3,000

Write-offs = 50

Ending balance = 2,950

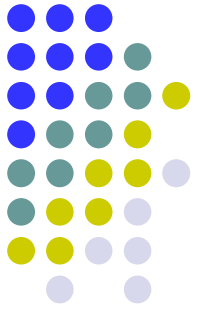
Allowance for doubtful accounts (XA)

Beg Balance = 300

Write-offs = 50

Ending balance = 250

Income Statement and Balance Sheet Relations



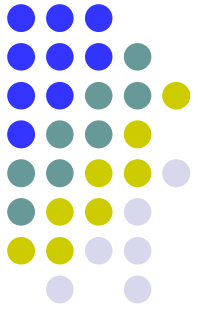
Accounts Receivable (A)

Beg Balance	
Credit Sales	
	Cash collected
	Write-offs
Ending balance	

Allowance for doubtful accounts (XA)

	Beg Balance
	Amount of Bad Debt Expense
Write-offs	
	Ending balance

Income Statement and Balance Sheet Relations



Accounts Receivable (A)

Beginning Balance

+ Credit Sales

- Cash Collected

- Amounts Written Off

= Ending Balance

- Allowance for doubtful
Accounts **(XA)**

Beginning Balance

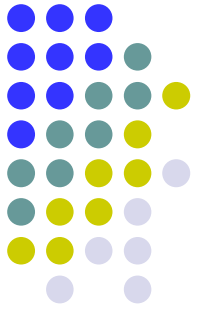
+ Amounts Recorded as Bad

Debt Expense

- Amounts Written Off

= Ending Balance

ALLOWANCE FOR BAD DEBTS (UNCOLLECTIBLES)



- Methods
 - Direct Write-Off Method
 - Required by IRS
 - Disallowed under GAAP
 - Percentage of Sales
 - Aging

- How might a firm's choice of method evolve over time?