

15.516x Financial Accounting Revenue Recognition / Allowances

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Finance at MIT

Where ingenuity drives results

Introduction

Last Class:

- Accounting Equations
- Concepts of Accrual Accounting
- Balance Sheet Equation entries
- Peters Company financial statements

This Class:

- Finish Peters Company financial statements
- Revenue recognition
- Allowance accounting

Peters -- Summary of year 1

| Performance Measure | Year 1 | Year 2 | Total |
|---|--------|--------|-------|
| Net Income | 3 | | |
| Minus: Cash Flow from Operations (CFO) | 8 | | |
| Accruals | -5 | | |

Exercise: The Peters Company

Peters Company was in business for two years, during which it entered into the following transactions:

Year 1:

1. The owners contributed \$24,000 cash
2. At the beginning of the year, rented a warehouse for two years with a prepaid rent payment of \$12,000
3. Purchased \$10,000 of inventory on account
4. Sold half the inventory for \$24,000, receiving \$20,000 in cash and an account receivable of \$4,000
5. Paid wages of \$6,000. Accrued wages payable of \$4,000
6. Entered into a contract with Julies Company to sell remaining inventory in Year 2. Received a cash advance of \$6,000 from Julies Company
7. Paid dividend of \$1,000

Year 2:

1. Shipped remaining inventory to Julies Company, received additional \$24,000
2. Paid the outstanding balance for the inventory purchased in Year 1
3. Paid the outstanding wages balance
4. Received full payment on the outstanding accounts receivable
5. Incurred and paid wages of \$12,000
6. Paid dividend of \$9,000

Peters Company, Year 2

| | Assets | | | | = | Liabilities + | | | Stockholders Equity | |
|-------------------|---|-----|------------|-----|---------------------------------------|---------------|---------|------|---------------------|-----|
| | Cash | A/R | PrePd Rent | Inv | = | A/P | Def Rev | WPay | Cont cap | R/e |
| beginning balance | | | | | | | | | | |
| BB | 31 | 4 | 6 | 5 | | 10 | 6 | 4 | 24 | 2 |
| 1A | 24 | | | | | | | | | 24 |
| 1B | deferred revenue becomes regular revenue. | | | | | | -6 | | | 6 |
| 1C | | | | -5 | | | | | | -5 |
| 2 | -10 | | | | | -10 | | | | |
| 3 | -4 | | | | | | | -4 | | |
| 4 | 4 | -4 | | | | | | | | |
| 5 | -12 | | | | | | | | | -12 |
| 6 | -9 | | | | | | | | | -9 |
| adjusting entry | Adj Ent | | -6 | | see whether our assets are overvalued | | | | | -6 |
| ending balance | EB | 24 | 0 | 0 | | 0 | 0 | 0 | 24 | 0 |

At the end of the second year, Peter's company is no longer an operating company. And all it has on its balance sheet is a bunch of cash, which is owned by its original stockholders.

Income Statement (Ignoring Taxes)

income statement lives over in the retained earnings section, except for dividends

Peters Company Income Statement 12/31/x2

| | |
|----------------------------------|------------|
| Revenue | 30 |
| Cost of Goods Sold | <u>-5</u> |
| Gross Margin <i>gross profit</i> | 25 |
| Less Operating Expenses | |
| Rent | -6 |
| Wage Expense | <u>-12</u> |
| Total Operating expenses | <u>-18</u> |
| Net Income | 7 |

Statement of Cash Flows

Peters Company
Statement of Cash flows
12/31/x2

| | | |
|---------------------------|------------|----|
| Beginning Cash | | 31 |
| Cash Flow From Operations | | |
| Cash rec. from cust. | 28 | |
| Less payment to vendors | -10 | |
| Less Wages Paid supplier | <u>-16</u> | |
| Total CFO | | 2 |
| Cash from Investing (CFI) | | 0 |
| Cash From Financing | | |
| Dividend | <u>-9</u> | |
| Total CFF | | -9 |
| Ending Cash | | 24 |

The Peters Company

over the life of the firm, net income is going to equal to cash flow from operations, accruals are 0

| Performance Measure | Year 1 | Year 2 | Total |
|---|--------|--------|-------|
| Net Income..... | 3 | 7 | 10 |
| Minus: Cash Flow from Operations (CFO)..... | 8 | 2 | 10 |
| | _____ | _____ | _____ |
| Accruals..... | -5 | 5 | 0 |

So what this means is that if we manipulate earnings by manipulating accruals upward, that upward manipulation tends to reverse in the next year

Finding US companies' financial statements

Optional: Firms' Financial Statements from SEC "EDGAR"

- Pick a company that interests you
- <http://www.sec.gov/edgar/searchedgar/companysearch.html>
- Recommended: Download 10-K
 - *Do not print 10-K – can be several hundred pages long*
- Or, search for company's investor relations website, e.g., "Tesla investor relations"

Edgar search on “Dell Technologies” 10-K



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U.S. Securities and Exchange Commission

EDGAR Search Results

EDGAR Search Results
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Dell Technologies Inc. CIK#: 0001571996 (see all company filings)

SIC: 3571 - ELECTRONIC COMPUTERS

State location: TX | State of Inc.: DE | Fiscal Year End: 0131

formerly: Dell Technologies Inc (filings through 2020-01-29)

formerly: Denali Holding Inc. (filings through 2016-07-21)

(Office of Technology)

Get **insider transactions** for this issuer.

Get **insider transactions** for this reporting owner.

Business Address

ONE DELL WAY
ROUND ROCK TX 78682
800-289-3355

Mailing Address

ONE DELL WAY
ROUND ROCK TX 78682

Filter Results:

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Prior to: (YYYYMMDD)

Ownership?

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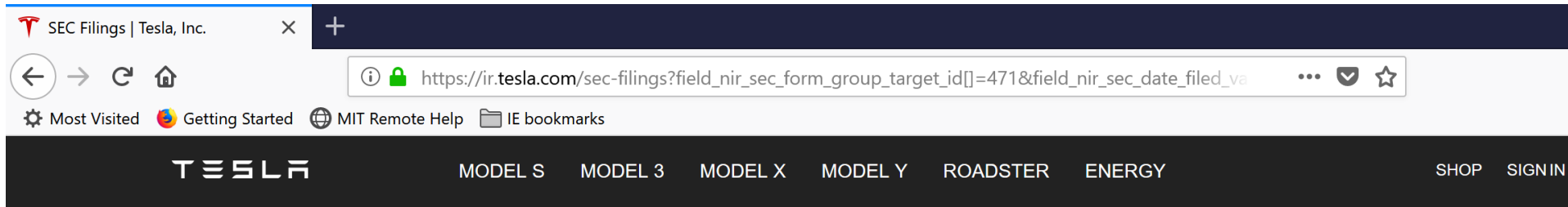
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| Filings | Format | Description | Filing Date | File/Film Number |
|---------|--|---|-------------|-----------------------|
| 10-K | Documents Interactive Data | Annual report [Section 13 and 15(d), not S-K Item 405] Acc-no: 0001571996-19-000008 (34 Act) Size: 34 MB | 2019-03-29 | 001-37867 19717106 |
| 10-K | Documents Interactive Data | Annual report [Section 13 and 15(d), not S-K Item 405] Acc-no: 0001571996-18-000004 (34 Act) Size: 28 MB | 2018-03-29 | 001-37867 18720720 |
| 10-K | Documents Interactive Data | Annual report [Section 13 and 15(d), not S-K Item 405] Acc-no: 0001571996-17-000004 (34 Act) Size: 28 MB | 2017-03-31 | 001-37867 17728080 |

Tesla investor relations



Investors

SEC Filings

| Group | | Filing year | Items per page: |
|------------------|------|--|---|
| Annual Filings x | | - Any - | 10 |
| Filing date | Form | Description | View |
| Feb 19, 2019 | 10-K | Annual report which provides a comprehensive overview of the company for the past year | PDF RTF XLS XBRL HTML |
| Feb 23, 2018 | 10-K | Annual report which provides a comprehensive overview of the company for the past year | PDF RTF XLS XBRL HTML |

Investors Overview

Investor Communication

Events & Presentations

Financials & Accounting

SEC Filings

Corporate Governance

This class – The Role of Revenues

Earnings = Revenues – Expenses

Revenue Recognition

Expenses matched to revenues by
matching principle

Two critical issues:

- When are revenues earned?
 - First part of this class...
- Estimates (later in this class):
 - Bad debts
 - Returns

Clearly, revenues are important!

So revenue recognition determines revenue, and it determines expenses. And therefore, it determines earnings

Revenue Transactions - example 1

Dell sells a \$1,000 computer. Cost is \$500.

| Assets | | | Liabilities | | S/E |
|---|-------|-------|-------------|--------------|------------|
| Cash | A/R | Inv | = | Deferred Rev | + |
| | | | | | R/E |
| 1. Sell computer costing \$500 for \$1,000 in cash | | | | | |
| 1,000 | | | | | 1,000 Rev |
| | | (500) | | | (500) COGS |
| 2. Sell computer costing \$500 for \$1,000 on account | | | | | |
| | 1,000 | | | | 1,000 Rev |
| | | (500) | | | (500) COGS |
| 3. Receive \$1,000 prepayment for computer | | | | | |
| 1,000 | | | | 1,000 | |
| 4. Deliver computer | | | | | |
| | | | | (1,000) | 1,000 Rev |
| | | (500) | | | (500) COGS |

Types of fraud – SEC audit and enforcement releases 1982 – 2015 (Source Dechow et al / SEC)

| | |
|---|--------|
| Misstated revenue | 50.35% |
| Misstatement of other expense / shareholder equity account | 34.14% |
| Capitalized costs as assets | 27.86% |
| Misstated accounts receivable | 19.35% |
| Misstated inventory | 13.58% |
| Misstated cost of goods sold | 10.44% |
| Misstated reserve account | 9.22% |
| Misstated liabilities | 9.02% |
| Misstated marketable securities | 3.65% |
| Misstated allowance for bad debt | 3.24% |
| Misstated payables | 2.13% |

Old Revenue Recognition Standard

Old revenue recognition standard (SFAS 5, 1984):

Is it earned? Is it collectible?

Earned: Is the earnings process substantially complete?

- E.g., has the company delivered the good or service? How much will be returned?

Collectible: Is cash collection reasonably assured?

- E.g., will the company collect on its accounts receivable?

Channel Stuffing: Moving next year's sales into this year



Can they recognize revenue?

No. Revenue not earned – haven't shipped anything of value. Also not collectible – customers won't pay for this.

Revenue Recognition Bausch and Lomb 1993

In December 1993, Bausch and Lomb projects that it is \$15 million short of its sales budget. If Bausch and Lomb does not meet its sales budget, executive bonuses will be lowered.

Some choices to increase revenues in December 1993:

1. Do more advertising and sales promotions
2. Discount to customers buying by December 31, 1993
3. Backdate January revenues to December 1993
4. Make up receipts

Within-
GAAP

Generally Accepted Accounting Principles

Fraud

Revenue Recognition Bausch and Lomb 1993

In late December, transferred \$22 million of products to distributors.

It recognized \$22 million in revenues and \$13 million in profit in fiscal year 1993.

Revenue recognition intuition:

Collectible: Is cash collection on accounts receivable reasonably assured?

- Never had payment problems with distributors.

Earned: Is the earnings process substantially complete?

- How much (if any) inventory will be returned?
- Later discovered that B&L had side agreements allowing for products to be returned.
- Because it did not reduce revenues by expected returns, revenues and earnings overstated.
- Fraud. CEO fired.

New Revenue Recognition Standard

Old revenue recognition standard (SFAS 5, 1984):

Is it earned? Is it collectible?

With a simple product like a Shrek DVD, revenue recognition is fairly straightforward.

- Relies on management estimate of how much inventory will be returned.

A bundled product (like iPhone) is more complex.

- (1) a phone delivered immediately, and (2) software updates delivered over time.
- How to divide revenue between the two?

New revenue recognition standard (ASU 2014-09 effective 12/15/17) addresses these issues.

Revenue Transactions - example 2

Apple sells iPhone and 4-year software updates for \$1,000 in cash. Cost is \$500.

| Assets | | Liabilities | | S/E | Gross Profit |
|---|-----|-------------|----------------|-------------------------|--------------|
| Cash | A/R | Inv = | Deferred Rev + | R/E | |
| how much revenue we associated with the software updates is going to determine our current year profitability. Of course, total profitability this doesn't affect because, as we deliver these software updates, they will be taken into regular revenue. | | | | | |
| 1. Updates are worth \$0. | | | | | |
| 1,000 | | (500) | | 1,000 Rev (500) COGS | 500 |
| 2. Updates are worth \$100. | | | | | |
| 1,000 | | (500) | 100 | 900 Rev (500) COGS | 400 |
| 3. Updates are worth \$200. | | | | | |
| 1,000 | | (500) | 200 | 800 Rev (500) COGS | 300 |

HP and Autonomy example

HP bought Autonomy (a UK software company) for \$11 billion in 2011.

A year later, HP valued Autonomy at \$2 billion (an 80% loss).

HP alleges that Autonomy overstated its revenues (and the price HP paid).

- Alleges Autonomy converted software service deals to software licensing deals.

Why does it matter if software is a license or a service?

- If a license, most revenue (and earnings) upfront.
- If a service, revenue (and earnings) over time as services are provided.

Insider reveals creative Autonomy accounting (itnews 1/7/2012)

A four-year software as a service deal was morphed into a software licensing contract.

The contract was structured so a large amount of the fees were deemed to be for software licenses.

In doing so, Autonomy was able book most of the revenue from the deal upfront, making it appear as the company was growing far quicker than it actually was.

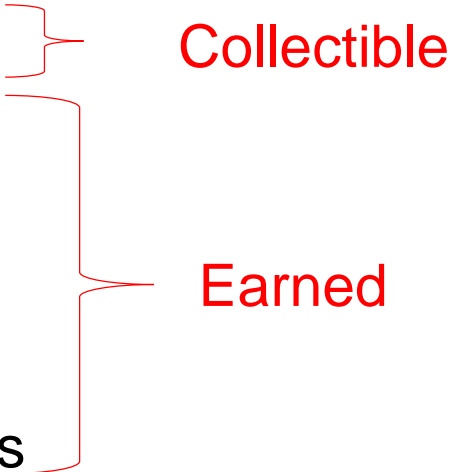
Autonomy Revenue and Change in Deferred Revenue

| Year | 2008 | 2009 | 2010 |
|---|---------|---------|---------|
| Revenue | 503,229 | 739,688 | 870,366 |
| Deferred Revenue | 99,208 | 173,507 | 177,677 |
| Change in Deferred Revenue | | 74,299 | 4,170 |
| Change in Deferred Revenue (% of sales) | | 10.0% | 0.5% |

So it suggests that maybe Autonomy, at least in 2010, was not deferring as much revenue as it had in the past

New revenue recognition standard (ASU 2014-09 effective 12/15/17)

For companies with fiscal years beginning after **12/15/17**, five steps to recognize revenue:

1. Identify the contract with a customer
 2. Identify the performance obligations in the contract
 3. Determine the transaction price
 4. Allocate the transaction price
 5. Recognize revenue as the entity satisfies the performance obligations
- 
- The diagram uses red curly braces to group the five steps. A brace on the right side of steps 1 and 2 is labeled 'Collectible'. A larger brace on the right side of steps 3, 4, and 5 is labeled 'Earned'.
- Collectible**
- Earned**

New revenue recognition standard – iPhone example (ASU 2014-09 effective 12/15/17)

1. Identify the contract with a customer

Apple sells iPhone and 4-year software updates for \$1,000 in cash.

2. Identify the performance obligations in the contract

1) deliver updates over 4 years; 2) deliver phone

3. Determine the transaction price

\$1,000 in cash

So this is going to be management judgment to say that the updates are worth \$200.

4. Allocate the transaction price

1) \$200 updates; 2) \$800 phone

5. Recognize revenue as the entity satisfies the performance obligations

1) updates over 4 years; 2) \$800 phone on delivery

What are the products and services Spartan sells to its customers and partners?

Race Entry

Parking Space

Jacket

Annual Race Pass

Advertising/sponsorships

Training class/Certification

In this class, we discuss the accounting for some of these products and services.

On 1/1 Spartan sells me an annual pass for \$1000, how will it affect Spartan's financial statements?

ASSETS = LIABILITIES + S/E

Cash = Def Rev R/E

Case 1: Earn all the revenue at the time of the sale

1000 1000

Case 2: Defer all of the revenue at the time of the sale

1000 1000

Then recognize some as time passes (or races occur)

-100 100

Which is correct?

Case 2

For \$800 Spartan sells a package of a Season pass and a jacket

Suppose the coat costs Spartan \$50 to make and retails for \$200, and is sent immediately on receipt of payment. Also, the season package retails for \$750.

To determine how the price should be allocated, Spartan uses the relative retail value of each component of the bundle as follows:

| Performance Obligation | Estimated Retail Value | % of Total | | Bundled Price | | Sales price allocation | Recognize Rev? |
|------------------------|------------------------|------------|---|---------------|---|------------------------|----------------|
| Pass | \$750 | 79% | x | \$800 | = | \$632 | Defer |
| + Coat | \$200 | 21% | x | \$800 | = | \$168 | Now |
| = Total | = \$950 | = 100% | | | | = \$800 | |

For \$800 Spartan sells a package of a Season pass and a jacket

Suppose the coat costs Spartan \$50 to make and retails for \$200, and is sent immediately on receipt of payment. Also, the season package retails for \$750.

At the time of the sale when the coat is delivered:

| ASSETS | | = | LIABILITIES | + | S/E |
|--------|-----|---|--------------|---|--|
| Cash | INV | = | Deferred Rev | | R/E |
| 800 | | | 632 | | 168 ^{regular revenue} Merchandise rev (calculated in prior slide) |
| | -50 | | | | -50 COGS |

Note: Here we are “allocating the transaction price” (Step 4) and recognizing revenue when “satisfying the performance obligation” (Step 5)

Dell Revenue Recognition footnote

at the top of the notes of the financial statement, they will talk about how they recognize revenue.

Revenue from the sale of hardware products is recognized **when control has transferred** to the customer.

Control is transferred when the hardware has been shipped to the customer, risk of loss has transferred to the customer, and we have a present right to payment.

the customer can't return it at this point, and we have a right to payment

If the customer is granted a right to additional unspecified future software licenses, revenue recognition **will be over time**. deferred

Services revenue consists of revenue from sales of support services. Revenue associated with undelivered performance obligations is **deferred**.

Take Away Slide

Revenue recognition can be complicated and involves estimates and judgment.

We will keep it straightforward in this class.

In the real world when you are analyzing a company:

- Recognize that judgments and estimates are being used allocating revenue between hardware and software
- Read revenue recognition footnote
- Compare it to how its peers are recognizing revenue
- Compare revenue to change in deferred revenue over time and with peers
- Think about what this means for the business decisions you face

Remaining Agenda for this class

The Role of Estimates

In Shrek 2, we talked about the possibility of product returns, and Dreamwork's failure to correctly estimate these returns

Focus: Understanding accounts receivables

- Why do firms give credit?

To generate revenues!

- What happens if a customer does not pay?

This is an expense that should be matched to revenues

Central Topic for remainder of this class:

- When we generate **revenues**, how do we estimate bad debts and “allow” for them?

in particular, credit revenues, A/R

Dell's business model

What is the business?

Selling computers

Who are the customers? How do they pay?

Retail and wholesale – cash and credit

Why give them credit?

give them the opportunity to buy more stuff from us, and therefore, generate more revenues

Generate more revenues

Does Dell appear successful?

High revenue growth and stock price

Dell Laptop with 12 month no interest financing



XPS 15 2-in-1

Starting at \$1,284.79

Our most powerful 15-inch 2-in-1.
Built with the first-ever quad-core 8th
Gen Intel® Core™ processor with
Radeon™ Vega M discrete graphics
on a single chip.

15" 2-in-1

No interest financing if paid in full within 12 months on new purchases \$699+

Revenue Transactions – example 1

Dell sells a \$1,000 computer. Cost is \$500.

| Assets | | | Liabilities | | S/E |
|--------|-------|-------|--------------|---|-------------------------|
| Cash | A/R | Inv = | Deferred Rev | + | R/E |
| | 1,000 | (500) | | | 1,000 Rev (500) COGS |

2. Sell computer costing \$500 for \$1,000 on account

2.

1,000

(500)

What happens if customers do not pay?

Dell will have Bad Debt expense.

Bad Debts

Two ways of accounting for bad debts:

- the direct method, and
- the allowance method.

We will begin by focusing on the direct method:

- The direct method is required for income tax purposes

We will then discuss two allowance methods:

- The percentage of sales method.
- The aging method.

Direct Method – an example

In this example, we ignore beginning and ending balances

- Q4 – 2/1/2019: Dell has credit sales of \$10 billion (\$10,000 million); ignore cost of goods sold entry for this example.
- On 3/1/2019, Dell's accountants estimate that customer accounts totaling \$60 million will never be paid. Dell records appropriate write-offs on 3/1/2019.

Direct Method (\$millions)

(ignoring beginning and ending balances)

| | | A/R (Asset) | | R/E (S/E) | Description |
|--------|----------------|----------------|--|--------------|---|
| 2/1/19 | Record revenue | \$ 10,000 | | \$10,000 | revenue on income statement (REV on I/S) |
| | | | | | |
| 3/1/19 | Write-off A/R | -\$60 | | -\$60 | bad debt expense (BDE on I/S) |

Bad debt expense is recognized in the quarter after sale;
Does not match revenue with expense of making sale

Allowance Method

Problems with the direct method?

- Improper matching of expenses to revenues
- More **reliable** info but less relevant (i.e. less timely)
 wait until the person actually is not going to pay you

To mitigate these problems, accountants use the “allowance” method.

- Estimate or allow for bad debts during the period in which the revenue is earned.
- More relevant info (i.e. more timely) but less reliable

The allowance method for accounting for bad debts is important, as we will use a similar approach for accounting for anticipated losses for other assets.

Note: real firms use different terms in this and in other situations:

- Bad debt expense = Provision for uncollectible accounts
- Allowance for bad debt = Allowance for doubtful accounts

Allowance for doubtful accounts

There are two methods of estimating the allowance for doubtful accounts:

The **percentage of sales method** estimates expected losses as a percentage of credit sales made during the period.

- Intuition: the more you sell, the more likely a loss.

The **aging method** estimates expected losses based on the age of the receivables.

- Intuition: the longer you have not been paid, the less likely you are to be paid.

Percentage of Sales Method – an example (ignoring beginning and ending balances)

- Q4 – 2/1/2019: Dell has credit sales of \$10 billion (\$10,000 million); ignore cost of goods sold entry for this example.
- 2/1/2019: Dell's accountants estimate that a total of 1% of Q4 credit sales are uncollectible, and provides for bad debt expenses accordingly.
- On 3/1/2019, Dell's accountants estimate that customer accounts totaling \$60 million will never be paid. Dell records appropriate write-offs on 3/1/2019.

Percentage of Sales Method (\$millions) (ignoring beginning and ending balances)

| | | A/R (Asset) | – Allow. For Doubtful Accounts (Contra-asset) | R/E (S/E) | Description |
|--------|----------------------------------|----------------|---|--------------|----------------------------------|
| 2/1/19 | Record revenue | \$ 10,000 | | \$10,000 | (REV on I/S) |
| 2/1/19 | Accrue bad debt expense (BDE) | | \$100 (= \$10,000*1%) | -\$100 | bad debt expense (BDE on I/S) |
| 3/1/19 | Write-off A/R | -\$60 | -\$60 | | |

Bad debt is expense recognized at time of sale;
Matches revenue with expense of making sale

No impact on R/E at
time of write-off

$$\text{A/R (net)} = \text{A/R (gross)} - \text{Allowance for doubtful accounts}$$

Dell's gross and net A/R for February 1, 2019 and February 2, 2018

Accounts receivable, net:

| | | | | |
|---------------------------------|----|--------|----|--------|
| Gross accounts receivable | \$ | 12,456 | \$ | 11,824 |
| Allowance for doubtful accounts | | (85) | | (103) |
| Total accounts receivable, net | \$ | 12,371 | \$ | 11,721 |

The Allowance for doubtful accounts contra asset account reduces the value of A/R (gross).

What happens if underestimate? (\$millions)

gross accounts receivable

allowance for doubtful accounts

1. On 2/1/2019, Dell's trade A/R is \$12,456 and its ADA is \$85.
2. On 3/1/2019, Dell's accountants estimate that customer accounts totaling **\$185** million will never be paid. Dell records appropriate write-offs on 3/1/2019.
3. Dell estimates its allowance should be \$100 million after the write-off.

| | A/R | -ADA | R/E |
|------------------------------|--------|------------|-------------|
| 2/1 – Beg. Balance | 12,456 | 85 | |
| 3/1 – Write-off | -185 | -185 | |
| 3/1 – Accrue bad debt | | 200 | -200 |
| 3/1 – End. Balance | 12,271 | 100 | |

always keep our allowance for doubtful accounts with a positive balance

Aside on income taxes

(looking ahead to class on income taxes)

The direct method is required for income tax returns.

Suppose Dell uses the percentage of sales method for its financial statements.

In general, will Dell's expense for bad debt on its tax return equal expense for bad debt on its income statement?

No

Because different rules are used for financial accounting and tax accounting, in general:

Expense (tax) \neq Expense (financial accounting)

Taxes paid (in cash) \neq Tax expense

taxable income is going to be greater or less than our financial reporting income

The BASE equation for changes in balance sheet amounts

Every balance sheet account uses the same BASE equation:

$$\begin{aligned} & \underline{\text{B}}\text{eginning balance (for example, ADA)} \\ + & \underline{\text{A}}\text{dditions (for example, bad debt expense)} \\ - & \underline{\text{S}}\text{ubtractions (for example, write-offs)} \\ = & \underline{\text{E}}\text{nding balance} \end{aligned}$$

Note:

The percentage of sales method gives bad debt expense, allowing us to compute the ending balance.

Aging analysis gives the ending balance, allowing us to compute bad debt expense.

Balance Sheet Account Formulas and their Income Statement Components

Accounts Receivable (Asset)

Beginning Balance

+ Credit Sales

– Cash Collected

– Amounts Written Off

= Ending Balance

Write-Off: Recognizing the
reduction in value of an asset
in the amount deemed
uncollectible

-Allowance for Doubtful Accounts (Contra Asset)

Beginning Balance

+ Bad Debt Expense

– Amounts Written Off

= Ending Balance

A Contra Asset account is
used to record reductions in
the value of an asset

Dell Corp (\$000s)

Schedule II – Valuation and qualifying accounts

| | | Fiscal Year Ended | |
|---|-----------------------------|-------------------|------------------|
| | | February 1, 2019 | February 2, 2018 |
| | | (in millions) | |
| Trade Receivables - Allowance for doubtful accounts: | | | |
| Balance at beginning of period | Beginning ADA | \$ 103 | \$ 57 |
| Provision charged to income statement | Bad Debt Expense | 77 | 60 |
| Bad debt write-offs | Amount deemed uncollectible | (95) | (14) |
| Balance at end of period | Ending ADA | \$ 85 | \$ 103 |
| Customer Financing Receivables - Allowance for financing receivable losses: | | | |
| Balance at beginning of period | Beginning ADA | \$ 145 | \$ 143 |
| Provision charged to income statement | Bad Debt Expense | 95 | 103 |
| Charge-offs, net of recoveries (a) | Amount deemed uncollectible | (104) | (101) |
| Balance at end of period | Ending ADA | \$ 136 | \$ 145 |

The “Schedule II” is included in firms’ financial statements and contains information about the allowance for doubtful accounts (ADA)

Allowance Method #2 - Aging Analysis

Suppose there are two customers, each of whom owe you \$100,000

Customer A incurred the debt this week, and has not paid.

Customer B incurred the debt 90 days ago, and has not paid.

Which customer do you expect to collect less from? Why?

Customer B has missed several payments. Likely not to pay in full.

Allowance Method #2 - Aging Analysis


two customers, they each owe us \$100,000. One hasn't paid us in less than 90 days, the other hasn't paid us in over 90 days.

| Balance (\$) | Age | Estimated % Uncollectible |
|--------------|--------------|------------------------------|
| 100,000 | < 90 days | 0.1% |
| 100,000 | Over 90 days | 1.0% |
| 200,000 | | |

Allowance Method #2 - Aging Analysis

| Balance (\$) | Age | Estimated % Uncollectible | Estimated \$ Uncollectible |
|--------------|------------------------------|------------------------------|-------------------------------|
| 100,000 x | < 90 days | 0.1% | = \$ 100 |
| 100,000 x | Over 90 days | 1.0% | = 1,000 |
| 200,000 | Total expected uncollectible | | \$ 1,100 |

This is the desired ending balance of the **ADA**. back into bad debt expense using the base equation allowance for doubtful accounts



Financial Statement Analysis Issues: Ratios Involving Receivables

A/R Turnover = Revenue / Average Accounts Receivable (net)

- This ratio measures how quickly you collect cash on credit sales. If company has lots of credit revenue, but very low receivables, it collects cash on its revenues quickly.
- A bigger number indicates faster collections.
That means that we don't have so much capital tied up in accounts receivable.

Days receivables = $(1 / \text{A/R Turnover}) * 365$

- Days receivable inverts the A/R Turnover calculation. This ratio measures the number of days that it takes a company to collect payment after a sale.
- A smaller number indicates faster collections.

Bausch and Lomb accounts receivables turnover calculation

| \$ million | 1990 | 1991 | 1992 | 1993 |
|-----------------|-------|-------------------------|-------------------------|---------------------|
| Net Sales | 1,369 | 1,520 | 1,709 | 1,872 |
| Net A/R | 203 | 205 | 277 | 385 |
| Average Net A/R | | 204 $= (203 + 205) / 2$ | 241 $= (205 + 277) / 2$ | 331 |
| A/R Turnover | | 7.45 | 7.09 $= 1709 / 241$ | 5.66 $= 1872 / 331$ |
| Days Receivable | | 49 | 51 | 65 |

So this is telling you that the company is doing something different with its accounts receivable

Liability for Return Allowances

If customer has the right to return the product, the seller must estimate the dollar value of returns.

Revenue is reported net of the amount expected to be returned.

Typically, sellers use a liability account, ***Liability for Return Allowances:***

- Analogous to Allowance for Doubtful Accounts (but liability not contra-asset)
- When return actually occurs, reduce both allowance and gross value of Accounts Receivable (similar to write-off).
 - when the return actually happens it's not going to reduce revenues and it's not going to reduce net income.
- Return has no effect on Net Income.

Liability for Return Allowances

Dreamworks ships \$100 million worth of Shrek 2 DVDs to retailers in Nov 2004 and expects 50% of them to be returned within the two-month return period. **Ignore COGS.**

| | | |
|-----|-------------------------|-----------------------------|
| AR | = Allowance for returns | RE |
| 100 | | 100 (revenue) |
| | 50 | (50) (reduction in revenue) |

In Dec 2004, \$30 million worth of Shrek 2 DVD are returned

| | |
|------|------|
| (30) | (30) |
|------|------|

Then, assuming no further sales of DVDs in Dec 2004

| | |
|---|----|
| Net Revenues in 2004: | 50 |
| Gross AR at the end of 2004: | 70 |
| Liability for Return Allowances at the end of 2004: | 20 |

bad debt expense Allowance for returns

Difference with **BDE**: **AFR** reduces revenue; BDE increases expense.

both of them have the same effect on net income

Amazon note on Return allowances

Return allowances, which reduce revenue and cost of sales, are estimated using historical experience.

Liabilities for return allowances are included in “Accrued expenses and other” and were \$567 million, \$468 million, and \$623 million as of December 31, 2016, 2017, and 2018.

Additions to the allowance were \$1.5 billion, \$1.8 billion, and \$2.3 billion and **deductions from the allowance** were \$1.5 billion, \$1.9 billion, and \$2.3 billion in 2016, 2017, and 2018.

Included in “Inventories” on our consolidated balance sheets are assets totaling \$411 million, \$406 million, and \$519 million as of December 31, 2016, 2017, and 2018, for the **rights to recover products from customers** associated with our liabilities for return allowances.

So they've actually shipped these goods out, but because they expect them to be returned they keep those in inventory. So Amazon's inventories includes items that Amazon owns right now and also items that Amazon expects their customers to return.

Take-Away slide

Revenues are recognized when earned; expenses are matched to revenues generated

- Thus, revenues are the most important driver of net income

Allowing customers to buy on credit, allowing them the right of return are part of the strategies companies use to generate higher revenues

But these strategies have risks: (a) risk of bad debts, (b) risk of returns

To accurately reflect the costs that arise out of these risks:

- Estimate expected bad debts and expected returns
- Recognize these estimates as revenues are recognized [to do the matching principle](#)
- There is scope for judgement/discretion in making these estimates

[So I could be very aggressive in terms of expecting not very much bad debt, and that's going to cause my earnings to be high, at least temporarily, until the time that the bad debt happens.](#)