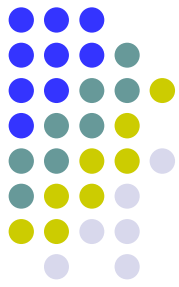


Receivables and Revenue Recognition



15.501/516 **Accounting**
Spring 2004

Professor S. Roychowdhury

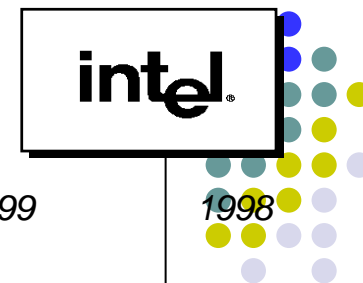
Sloan School of Management
Massachusetts Institute of Technology

Feb 25, 2004



Consolidated balance sheets

December 25, 1999 and December 26, 1998



(In millions--except per share amounts)

Assets

Current assets:

Cash and cash equivalents	\$ 3,695	\$ 2,038
Short-term investments	7,705	5,272
Trading assets	388	316
Accounts receivable, net of allowance for doubtful accounts of \$67 (\$62 in 1998)	3,700	3,527
Inventories	1,478	1,582
Deferred tax assets	673	618
Other current assets	180	122

Total current assets

17,819	13,475
---------------	---------------

Property, plant and equipment:

Land and buildings	7,246	6,297
Machinery and equipment	14,851	13,149
Construction in progress	1,460	1,622

23,557	21,068
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Less accumulated depreciation

11,842	9,459
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Property, plant and equipment, net

11,715	11,609
---------------	---------------

Marketable strategic equity securities

7,121	1,757
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Other long-term investments

790	3,608
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Goodwill and other acquisition-related intangibles

4,934	111
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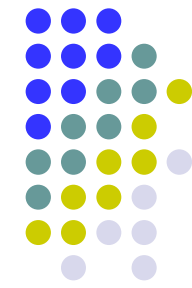
Other assets

1,470	911
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Total assets

\$ 43,849	\$ 31,471
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Liabilities and stockholders' equity



Liabilities and stockholders' equity

Current liabilities:

Short-term debt	\$ 230	\$ 159
Accounts payable	1,370	1,244
Accrued compensation and benefits	1,454	1,285
Deferred income on shipments to distributors	609	606
Accrued advertising	582	458
Other accrued liabilities	1,159	1,094
Income taxes payable	1,695	958

Total current liabilities

7,099	5,804
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Long-term debt

955	702
------------	------------

Deferred tax liabilities

3,130	1,387
--------------	--------------

Put warrants

130	201
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Commitments and contingencies

Stockholders' equity:

Preferred stock, \$.001 par value, 50 shares authorized; none issued	-	-
Common stock, \$.001 par value, 4,500 shares authorized; 3,334 issued and outstanding (3,315 in 1998) and capital in excess of par value	7,316	4,822
Retained earnings	21,428	17,952
Accumulated other comprehensive income	3,791	603

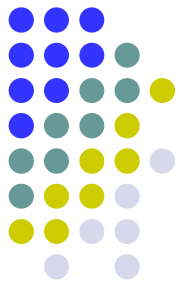
Total stockholders' equity

32,535	23,377
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Total liabilities and stockholders' equity

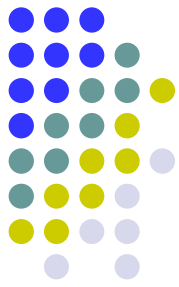
\$ 43,849	\$ 31,471
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ALLOWANCE FOR RETURNS



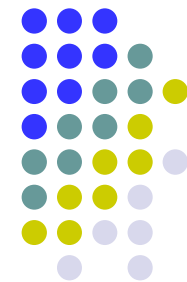
- ▶ If customer has the right to return the product, the seller must estimate the dollar value of returns.
- ▶ Revenue is reported net of the amount expected to be returned.
- ▶ Typically, seller sets up a contra-asset account, ***Allowance for Returns***:
 - Analogous to Allowance for Doubtful Accounts
 - When return actually occurs, reduce both Allowance and face value of Accounts Receivable (or Cash) by the invoice amount.
 - Return has no effect on Net Income, nor on Net Assets, just as Write-off of Uncollectible has no effect on these amounts.
 - BSE: $AR - Allowance\ for\ Returns = RE$
- ▶ Intel takes a slightly different approach: ***Deferred Income Liability***.

A Quick Look at Intel's Statements



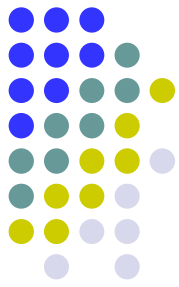
- Revenue recognition.
 - The company generally recognizes net revenues upon the transfer of title. However, certain of the company's sales are made to distributors under agreements allowing price protection and/or right of return on merchandise unsold by the distributors. Because of frequent sales price reductions and rapid technological obsolescence in the industry, Intel defers recognition of revenues on shipments to distributors until the merchandise is sold by the distributors.

Interpreting Intel's Revenue Footnote



- The company generally recognizes net revenues upon the transfer of title.
 - means that when products ship to customers, Intel recognizes net sales revenue (net of allowances for bad debts).
- However, certain of the company's sales are made to distributors under agreements allowing price protection and/or right of return on merchandise unsold by the distributors.
 - means that some products are sold to distributors who will resell them. Intel provides a safety net to distributors: returns and price protection.
- Because of frequent sales price reductions and rapid technological obsolescence in the industry, Intel defers recognition of revenues on shipments to distributors until the merchandise is sold by the distributors
 - means that instead of recognizing sales revenue and related COGS when these products ship to distributors, Intel waits for the price/return uncertainty is resolved -- giving rise to a Deferred Income Liability.

DEFERRED INCOME: AN EXAMPLE

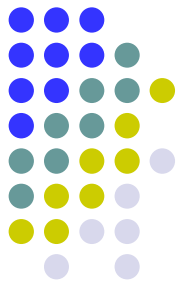


Shipments on 3/1 to OEMs and Distributors:

Total Billings	\$ 350,000	
Direct to OEMs		280,000
To Distributors (PP)		70,000
COGS	\$ 90,000	
Direct to OEMs		72,000
To Distributors (PP)		18,000

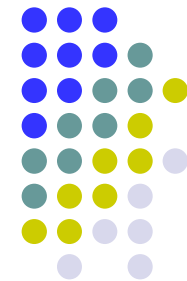
- Return / Price Protection expires for \$35K of sales on 3/31
- Invoice Price is reduced from \$35K to \$25K on the remainder of shipment on 4/15

DEFERRED INCOME: AN EXAMPLE



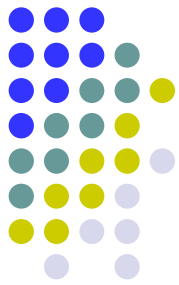
	AR + INV	Deferred Income + RE
OEM sales		
Distrib. Sales		
PP Expires For \$35K		
PP Applies For 35K		

DEFERRED INCOME: AN EXAMPLE

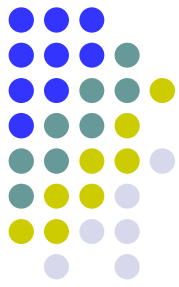


	AR	+	INV	Deferred Income	+	RE
OEM sales	280					280 rev.
			(72)			(72) exp.
<hr/>						
Distrib. Sales						
<hr/>						
PP Expires For \$35K						
<hr/>						
PP Applies For 35K						
Dr AR				280		
Cr Revenue – OEM					280	
Dr COGS – OEM				72		
Cr Inventory						72

DEFERRED INCOME: AN EXAMPLE



	AR	+	INV	Deferred Income	+	RE
OEM sales	280		(72)			280 rev. (72) exp.
Distrib. Sales	70		(18)	70		(18)
PP Expires For \$35K						
PP Applies For 35K						
Dr AR				70		
Cr Def Inc– Distr					70	
Dr Def Inc – COGS to Distr				18		
Cr Inventory						18



Deferred Income Liability

COGS to distributors = 18

Sales to distributors = 70

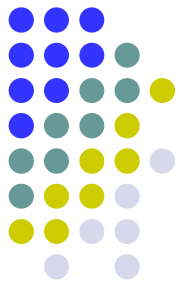
Accounts receivables

70

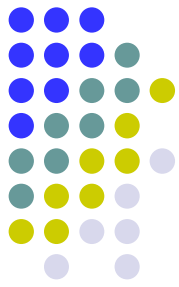
Inventory

18

DEFERRED INCOME: Confirmed sales



	AR	+	INV	Deferred Income	+	RE
OEM sales	280		(72)			280 rev. (72) exp.
Distrib. Sales	70		(18)	70 (18)		
PP Expires For \$35K				(35) 9		35 rev. (9) exp.
PP Applies For 35K						
Dr Def Inc				35		
Cr Revenue – Distr					35	
Dr COGS – Distr				9		
Cr Def Inc – COGS to Distr					9	



Deferred Income Liability

<p>COGS to distributors = 18</p> <p>Confirmed Sales = 35</p>	<p>Sales to distributors = 70</p> <p>COGS corresponding to confirmed sales = 9</p>
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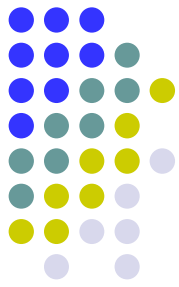
COGS

9

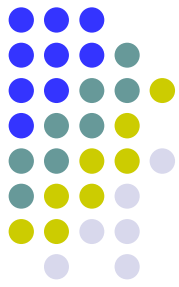
Revenues

35

DEFERRED INCOME: Price reductions



	AR	+	INV	Deferred Income	+	RE
OEM sales	280		(72)			280 rev. (72) exp.
Distrib. Sales	70		(18)	70 (18)		
PP Expires For \$35K				(35) 9		35 rev. (9) exp.
	(10)			(10)		
PP Applies For 35K						
Dr Deferred income					10	
Cr AR						10



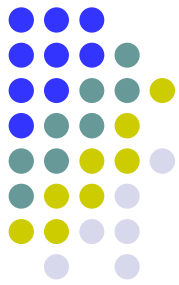
Deferred Income Liability

COGS to distributors = 18	Sales to distributors = 70
Confirmed Sales = 35	COGS corresponding to confirmed sales = 9
Price reductions = 10	

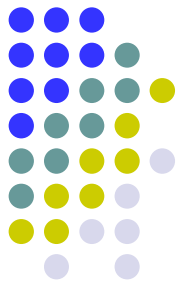
Accounts receivables

70	10
----	----

DEFERRED INCOME: Confirmed sales (2nd lot)



	AR	+	INV	Deferred Income	+	RE
OEM sales	280		(72)			280 rev. (72) exp.
Distrib. Sales	70		(18)	70 (18)		
PP Expires For \$35K				(35) 9 (10)		35 rev. (9) exp.
PP Applies For 35K				(25) 9		25 rev. (9) exp.
Dr Def Inc				25		
Cr Revenue – Distr					25	
Dr COGS – Distr				9		
Cr Def Inc – COGS to Distr					9	



Deferred Income Liability

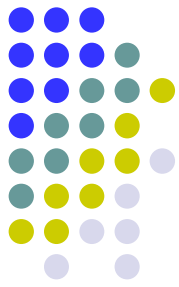
<p>COGS to distributors = 18</p> <p>Confirmed Sales = 35</p> <p>Price reductions = 10</p> <p>Confirmed Sales (2nd lot) = 25</p> <hr/> <p style="text-align: center;">88</p>	<p>Sales to distributors = 70</p> <p>COGS corresponding to confirmed sales = 9</p> <p>COGS corresponding to second lot = 9</p> <hr/> <p style="text-align: center;">88</p>
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Revenues

COGS
9
9
18

35
25
60

Distributors pay up



Cash

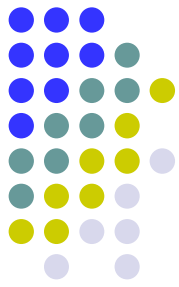
$35+25 = 60$

Accounts receivables

70	10
	60
0	

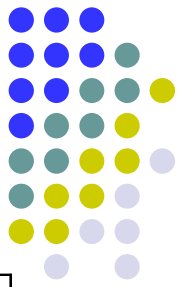
Recognizing Revenue:

Is additional service required?



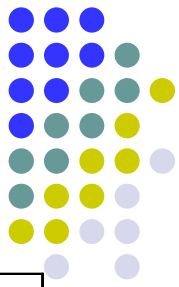
- Example of Warranty Coverage: Seller promises to repair or replace defective products for a specified period of time
- Sales transaction commits seller to incur uncertain, but predictable, future costs: must be matched to sales revenues
- Example:
 - On 7/1, Hauser, Inc. sells 50 word processors for \$1,000 each on account.
 - Warranty period of 1 year, parts and labor, applies to each unit.
 - Past experience indicates that warranty costs will average \$20/unit and that 5% of credit sales will not be collected.
 - As of December 31, actual warranty costs incurred are \$350. \$40K has been collected from the customers, and one account of \$1,000 has been written off.

Accounting for Warranty Expense (with a refresher on Bad Debt expense...)



	Cash	+ A/R	- ADA	Accrued Warranty Liability	+ Ret. Earn.
7/1 Sale					
Accrue warranty exp.					
Accrue bad debts					
Collect cash					
Incur warranty costs					
Write-off uncoll. A/R					

Accounting for Warranty Expense (with a refresher on Bad Debt expense...)



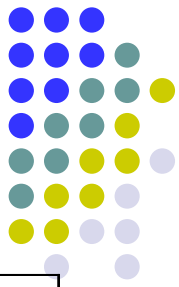
	Cash	+ A/R	- ADA	Accrued Warranty Liability	+ Ret. Earn.
7/1 Sale		50,000			50,000
Accrue warranty exp.					
Accrue bad debts					
Collect cash					
Incur warranty costs					
Write-off uncoll. A/R					

Dr Accounts Receivables
Cr Revenues

50,000

50,000

Accounting for Warranty Expense (with a refresher on Bad Debt expense...)



	Cash	+ A/R	- ADA	Accrued Warranty Liability	+ Ret. Earn.
7/1 Sale		50,000			50,000
Accrue warranty exp.				1,000	-1,000
Accrue bad debts					
Collect cash					
Incur warranty costs					
Write-off uncoll. A/R					

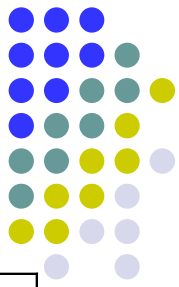
Dr Warranty Expense

1,000

Cr Accrued Warranty Liability

1,000

Accounting for Warranty Expense (with a refresher on Bad Debt expense...)



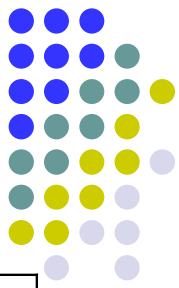
	Cash	+ A/R	- ADA	Accrued Warranty Liability	+ Ret. Earn.
7/1 Sale		50,000			50,000
Accrue warranty exp.				1,000	-1,000
Accrue bad debts			-2,500		-2,500
Collect cash					
Incur warranty costs					
Write-off uncoll. A/R					

Dr Bad debt expense
Cr ADA

2,500

2,500

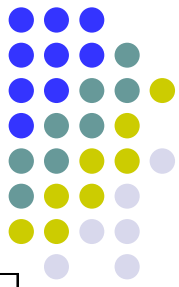
Accounting for Warranty Expense (with a refresher on Bad Debt expense...)



	Cash	+ A/R	- ADA	Accrued Warranty Liability	+ Ret. Earn.
7/1 Sale		50,000			50,000
Accrue warranty exp.				1,000	-1,000
Accrue bad debts			-2,500		-2,500
Collect cash	+40,000	-40,000			
Incur warranty costs					
Write-off uncoll. A/R					

Dr Cash 40,000
 Cr Accounts receivables 40,000

Accounting for Warranty Expense (with a refresher on Bad Debt expense...)



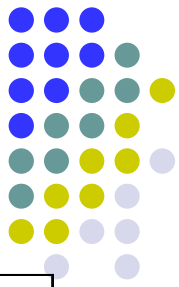
	Cash	+ A/R	– ADA	Accrued Warranty Liability	+ Ret. Earn.
7/1 Sale		50,000			50,000
Accrue warranty exp.				1,000	–1,000
Accrue bad debts			–2,500		–2,500
Collect cash	+40,000	–40,000			
Incur warranty costs	–350			– 350	
Write-off uncoll. A/R					

Dr Accrued warranty Liability
Cr Cash

350

350

Accounting for Warranty Expense (with a refresher on Bad Debt expense...)



	Cash	+ A/R	- ADA	Accrued Warranty Liability	+ Ret. Earn.
7/1 Sale		50,000			50,000
Accrue warranty exp.				1,000	-1,000
Accrue bad debts			-2,500		-2,500
Collect cash	+40,000	-40,000			
Incur warranty costs	-350			- 350	
Write-off uncoll. A/R		-1,000	+1,000		

Dr ADA 1,000
Cr Accounts receivables 1,000