15.516x Financial Accounting

Acquisitions – AT&T/DirecTV
Financial Investments

John Core
MIT Sloan School of Management

Finance at MIT
Where ingenuity drives results

Agenda

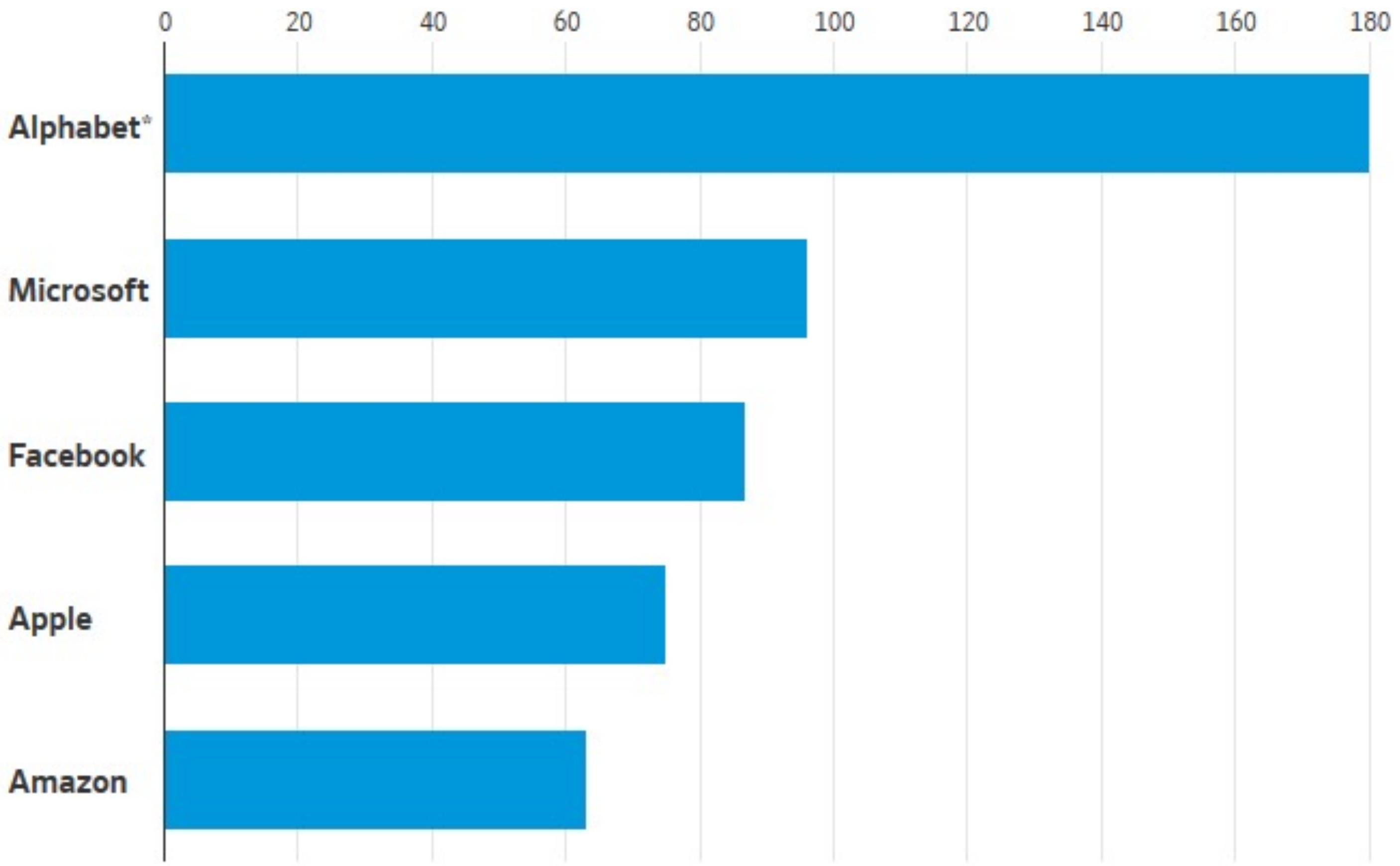
This Class:

- Acquisitions – AT&T/DirecTV Case
- Financial Investments

Acquisitions – AT&T/DirecTV – objectives

- Understand some of the basics of mergers and acquisitions
- Discuss how firms account for mergers and acquisitions
- Introduce goodwill accounting and the inherent difficulties associated with accounting for goodwill

Announced or completed acquisitions since 2010 (WSJ 2/12/2020)



*Did business as Google prior to 2015
Source: FactSet

AT&T's Acquisition of DirecTV

- What is DirecTV?
  - Satellite TV provider
  - Competitor to cable companies like Comcast

- Why was AT&T interested in DirecTV?
  - AT&T could provide internet but not TV
  - AT&T and DirecTV could cross-sell each others' customers, increasing profits
  - Wanted to diversify and compete with Comcast, etc. that had cable TV and internet

- What is AT&T's alternative to purchasing DirecTV?
  - With work and expense, could develop TV capability internally
  - Buy a different satellite/cable TV company

The Acquisition

- How much did AT&T pay for DirecTV and how did they finance the acquisition?
  - AT&T paid $47.8 billion
  - 70% stock / 30% cash deal
  - 38% premium to pre-announcement stock price
  - Assumed the assets and liabilities of DirecTV

DirecTV

Before the acquisition, as of June 30, 2015:

DirecTV had a market value of equity (MVE) of $34.7 billion.

Its net assets (A – L) or book value of equity (BVE) was -$3.4 billion.

assets minus liabilities

equity is net assets or assets minus liabilities

How does DirecTV have such a large market value and such a low book value of equity?

- Valuable intangible assets are off-balance sheet

They're part of the market value, but they're not part of the book value

- Intangible assets include:
  - Intellectual property (Patents, Copyrights, Trademarks)
  - Licenses, Franchise rights
  - Brand value
  - Customer lists
  - Goodwill

In this class, we see that acquisitions put intangible assets on B/S.

Let's Think About the Acquisition Price…

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- What is AT&T's acquisition price?
  - *$47.8 billion* 38% premium to pre-announcement stock price
- How is AT&T financing / paying for the acquisition?
  - *Stock and cash*
- What is the book value of DirecTV's Shareholders' Equity at 6/30/15?
  - *-$3.4 billion*
- What is AT&T paying for? What is AT&T paying for when it pays that $47.8 billion for a company that has negative book value of $3.4 billion?
  - Intellectual Property (Patents, Copyrights, Trademarks)
  - Licenses, Franchise rights
  - Brand value
  - Customer Lists
  - Goodwill
  - Control -- to become the sole shareholder

intangible assets

pay a premium for control

The Acquisition

- Why did AT&T pay more than the prevailing stock price for DirecTV's shares?
  - There may be "synergies" from the acquisition – the combination of AT&T and DirecTV is worth more than the two separately.
  - The seller (DirecTV) is able to capture some of the premium associated with those synergies
  - Premium for control

DirecTV's Balance Sheet (A – L = SE)
(June 30, 2015 10-Q - just prior to the merger)

	BV before merger	
Tangible Assets	20,490	
Intangible Assets	946	
Goodwill	3,885	
Total assets	25,321	
-Total liabilities	-28,784	
Book value of net assets (SE)	-3,463	

some intangible assets and goodwill tells us that DirecTV has itself done acquisitions.
those acquisitions have resulted in intangible assets and goodwill on their balance sheet.

Given the acquisition price, what is the market value of net assets?

DirecTV's Balance Sheet (June 30, 2015 10-Q - just prior to the merger)

	Book Value BV before merger	Market Value MV after merger
Tangible Assets	20,490	
Intangible Assets	946	
Goodwill	3,885	
Total assets	25,321	
-Total liabilities	-28,784	
Book value of net assets (SE)	-3,463	47,763

AT&T purchase

Given the acquisition price, what is the market value of net assets?

How Do We Account for the Acquisition?

Under purchase accounting the entire acquisition payment is added to the acquirer's balance sheet, and distributed across:

1. Fair value of tangible assets and liabilities
   - Satellites and PPE, financial assets, other assets, and liabilities
2. *Identifiable* intangible assets
   - Orbital slots, customer relationships, trade names, patents, etc.
3. Goodwill (an intangible asset that is not separately identifiable)
   - Everything else (the plug)

plug meaning that we're just going to solve for the amount of goodwill after we value the tangible assets and liabilities and after we've valued the identifiable intangible assets

This is called "allocating the purchase price"

Purchase Accounting – Allocating Acquisition Payments

1) The accounting records say the PPE is worth $9.5 billion, but it might actually be worth or less more than that.

   accumulated depreciation can be either more or less than economic depreciation

   - *Fair value of tangible assets*

   a bunch of experts value the PPE

2) The value of DirecTV's customer list is not reflected on the company's balance sheet. Nor is the value of DirecTV's orbital slots and spectrum and trade names.

   - *Identifiable intangibles* expert decide

3) There may be synergies between AT&T and DirecTV.

   - *Goodwill*

Allocating the purchase price

	BV before merger	MV after merger
Tangible Assets	20,490	
Intangible Assets	946	
Goodwill	3,885	
Total assets	25,321	
-Total liabilities	-28,784	
Book value of net assets (SE)	-3,463	47,763

1. Fair value of tangible assets and liabilities?

Allocating the purchase price

	BV before merger	MV after merger
Tangible Assets	20,490	20,004
Intangible Assets	946	
Goodwill	3,885	
Total assets	25,321	
-Total liabilities	-28,784	-42,863
Book value of net assets (SE)	-3,463	47,763

1. Fair value of tangible assets and liabilities.

Allocating the purchase price

	BV before merger	MV after merger
Tangible Assets	20,490	20,004
Intangible Assets	946	
Goodwill	3,885	
Total assets	25,321	90,626
-Total liabilities	-28,784	-42,863
Book value of net assets (SE)	-3,463	47,763

1. Fair value of tangible assets, total assets and liabilities.

Allocating the purchase price

	BV before merger	MV after merger
Tangible Assets	20,490	20,004
Intangible Assets	946	
Goodwill	3,885	
Total assets	25,321	90,626
-Total liabilities	-28,784	-42,863
Book value of net assets (SE)	-3,463	47,763

2. Value of intangible assets?

Allocating the purchase price

	BV before merger	MV after merger
Tangible Assets	20,490	20,004
Intangible Assets	946	36,195
Goodwill	3,885	
Total assets	25,321	90,626
-Total liabilities	-28,784	-42,863
Book value of net assets (SE)	-3,463	47,763

2. Value of intangible assets.

Allocating the purchase price

	BV before merger	MV after merger
Tangible Assets	20,490	20,004
Intangible Assets	946	36,195
Goodwill	3,885	
Total assets	25,321	90,626
-Total liabilities	-28,784	-42,863
Book value of net assets (SE)	-3,463	47,763

3. Solve for goodwill.

Allocating the purchase price

	BV before merger	MV after merger
Tangible Assets	20,490	20,004
Intangible Assets	946	36,195
Goodwill	3,885	34,427
Total assets	25,321	90,626
-Total liabilities	-28,784	-42,863
Book value of net assets (SE)	-3,463	47,763

3. Solve for goodwill.

Under Purchase Accounting:

- The entire acquisition payment is added to acquirer's balance sheet, and distributed across:

Fair Value

1. FV tangible assets and liabilities
2. Identifiable Intangibles
3. Goodwill

Balance Sheet entry:

Cash	FV Tang. Assets	Identif. Intangibles	Goodwill	= FV Liab	+ SE
-14,378	20,004	36,195	34,427	42,863	33,384
pay with cash					issue new stock

AT&T paid $47.8 billion, 70% stock / 30% cash deal

	BV before merger	MV after merger
Tangible Assets	20,490	20,004
Intangible Assets	946	36,195
Goodwill	3,885	34,427
Total assets	25,321	90,626
-Total liabilities	-28,784	-42,863
Book value of net assets (SE)	-3,463	47,763

Difference in DirecTV balance sheet before and after acquisition

	BV before merger	Change MV-BV (Acquisition Adjustments)	MV after merger
Tangible Assets	20,490	-486	20,004
Intangible Assets	946	35,249	36,195
Goodwill	3,885	30,542	34,427
Total assets	25,321	65,305	90,626
-Total liabilities	-28,784	-14,079	-42,863
Book value of net assets (SE)	-3,463	51,226	47,763

AT&T / DirecTV Pro Forma Combined Balance Sheet

	BV before merger	Change MV-BV (Acquisition Adjustments)	MV after merger
Tangible Assets	20,490	-486	20,004
Intangible Assets	946	35,249	36,195
Goodwill	3,885	30,542	34,427
Total assets	25,321	65,305	90,626
-Total liabilities	-28,784	-14,079	-42,863
Book value of net assets (SE)	-3,463	51,226	47,763

5061+15429=20490

	Pre-Merger Balance Sheets		Pro Forma		
	AT&T 6/30/15	DirecTV 6/30/15	Acq. Payment	Acq. Adjustments	AT&T Pro Forma
Cash	20,956	5,061	-14,378	20956+5061-14378=	11,639
Other Tangible Assets	147,306	15,429		-486	162,249
Intangible Assets	87,307	946		35,249	123,502
Goodwill	70,920	3,885		30,542	105,347
Total assets	326,489	25,321		65305	402,737
-Total liabilities	-238,988	-28,784		-14,079	-281,851
Book value of net assets	87,501	-3,463	33,384	3,463	120,886

cancel out

Balance Sheet entry:

Cash	FV Tang. Assets	Identif. Intangibles	Goodwill	= FV Liab	+ SE
-14,378	20,004	36,195	34,427	42,863	33,384
pay with cash					issue new stock

calculation of BS entry: pro forma combined BS

Facebook allocation of $18.0 billion purchase price for 2014 WhatsApp acquisition

	Preliminary fair values	Preliminary estimated useful life	Six months amortization based upon preliminary fair values	Annual amortization based upon preliminary fair values
Acquired users	$ 2,026	7 years	$ 145	$ 289
Tradename	448	5 years	45	89
Acquired technology	288	5 years	29	58
Other	21	2 years	5	11
Goodwill	15,314		—	—
	$ 18,097		$ 224	$ 447

Purchase price (ignores small FV of net assets)

Facebook Pro Forma Combined Balance Sheet at 6/30/2014

	Historical			
	Facebook, Inc.	WhatsApp Inc.	Pro Forma Adjustments	Pro Forma Combined
Assets				
Current assets:				
Cash and cash equivalents	$ 4,384	$ 152	$ (152)	$ 4,384
Marketable securities	9,572	—	(4,437)	5,135
Accounts receivable, net	1,190	—	—	1,190
Prepaid expenses and other current assets	411	8	83	502
Total current assets	15,557	160	(4,506)	11,211
Property and equipment, net	3,334	16	6	3,356
Goodwill and intangible assets, net	1,672	—	18,097	19,769
Other assets	206	2	158	366
Total assets	$ 20,769	$ 178	$ 13,755	$ 34,702
Liabilities and stockholders' equity				
Total liabilities	2,423	87	910	3,420
Total stockholders' equity	18,346	91	12,845	31,282
Total liabilities and stockholders' equity	$ 20,769	$ 178	$ 13,755	$ 34,702

Payment in cash and stock

Acquisition of WhatsApp FV assets – mainly ~~intangibles~~ goodwill

Whatsapp has 152 in cash   17,282 = 12,845 + 4437

Note that the cash payments (152 and 4,437) and the change in S/E of 12,845 total 17,282, which is different than the purchase payment shown on prior slide. This is because the purchase price does not include some changes in FV of net assets (as noted above), and the change in S/E includes adjustments in addition to the issuance of stock to WhatsApp.

Fair Value

Purchase Accounting – Post Acquisition

- What happens to net income for merged entity going forward:
  - In the acquisition year, basically:
    - add income of acquirer and target (eliminate intercompany sales)
  - Income in later years will be reduced by:
    - any additional depreciation on PPE and amortization charges on intangibles
    - goodwill impairments (if any)

Facebook identifiable intangible asset amortization

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	Preliminary fair values	Preliminary estimated useful life	Six months amortization based upon preliminary fair values	Annual amortization based upon preliminary fair values
Acquired users	$ 2,026	7 years	$ 145	$ 289
Tradename	448	5 years	45	89
Acquired technology	288	5 years	29	58
Other	21	2 years	5	11
Goodwill	15,314		—	—
	$ 18,097		$ 224	$ 447

$2,026 / 7 years = $289 / year

Facebook / WhatsApp Pro Forma income statement for the six months ended 6/30/2014

	Historical			
	Facebook, Inc.	WhatsApp Inc.	Pro Forma Adjustments	Pro Forma Combined
Revenue	$ 5,412	$ 15	$ —	$ 5,427
Costs and expenses				
Cost of revenue	936	44	11 (c) (h)	991
Research and development	947	68	483 (c) (h)	1,498
Marketing and sales	681	—	231 (c) (h)	912
General and administrative	384	135	(12) (h) (i)	507
Total costs and expenses	2,948	247	713	3,908
Income (loss) from operations	2,464	(232)	(713)	1,519
Interest and other income/(expense), net	(4)	(1)	—	(5)
Income (loss) before provision for income taxes	2,460	(233)	(713)	1,514
Provision for income taxes	1,027	—	(275) (j)	752
Net income (loss)	$ 1,433	$ (233)	$ (438)	$ 762

Includes amortization of intangibles.

Goodwill

- What assets are included in the goodwill balance?
  - Intangibles that are not separable, such as:
    - Synergies
    - Future profit increases
    - Growth options
    - Employees

- What happens to goodwill going forward?
  - Evaluate it for impairment annually

Goodwill Impairment

- What is goodwill impairment?
  - Write-down/reduction in value of goodwill
  - When? If the fair value of the goodwill is less than the book value of goodwill.
  - Intuition: lower of cost or market

    Goodwill is lower of cost or market. After the merger, if the value of the acquired subsidiary increases, there is no change to goodwill. But if the value decreases, the acquirer will write down the value of the goodwill.
- Where does the fair value of the goodwill come from?
  - Management estimate
- What happens when goodwill is impaired?
  - Company writes down the value of goodwill and recognizes a corresponding loss in the Income Statement

HP's Autonomy Acquisition (2011 10-K, footnote 6)

HP's largest acquisition in fiscal 2011 was … Autonomy …

The acquisition date fair value consideration of $11 billion consisted of cash...

HP recorded approximately $6.6 billion of goodwill and amortizable purchased intangible assets of $4.6 billion.

Balance sheet equation entry:

Cash	Fair Value FV Net Assets (A-L)	Intang.	Goodwill
-$11	~~0.2~~ 0.2	4.6	6.6

Hewlett Packard 2012 Annual report

Note 7: Goodwill and Purchased Intangible Assets

- The decline in the estimated fair value of the Autonomy reporting unit results from lower projected revenue growth rates and profitability levels…
- The lower projected operating results incorporate HP's analysis of what it believes were accounting improprieties, incomplete disclosures and misrepresentations at Autonomy that occurred prior to the Autonomy acquisition…

Goodwill Impairment: HP recorded an $8.8b writedown

- Hewlett-Packard has $6.6 billion of goodwill related to Autonomy; decides the fair value is $0

- Where does the remainder of HP's $8.8 billion write-off come from?
  - Probably "amortizable purchased intangible assets"

Balance Sheet entries:

Goodwill (A)	Intan.	R/E
(6.6)		(6.6) (Goodwill impairment)
	(2.2)	(2.2) (impairment of other intangibles)

Procter & Gamble writes down Gillette business (CNBC 7/30/2019)

- Procter & Gamble wrote down the value of its Gillette brand by $8 billion. (P&G bought Gillette in 2005.)
- Executives attributed the write-down to currency devaluations and lower shaving frequency.
- In the past 5 years, the U.S. men's market for shaving products has shrunk by over 11%.
- The consumer products giant has also faced increased competition from disruptors like Dollar Shave Club and Harry's.
- Net sales in the grooming business, which includes Gillette, have declined in 11 out of the last 12 quarters.

P&G takes $8 billion Gillette writedown

NET SALES	**$ 67,684**
Cost of products sold	**34,768**
Selling, general and administrative expense	**19,084**
Goodwill and indefinite lived intangibles impairment charges	**8,345**
OPERATING INCOME	**5,487**
Interest expense	**509**
Interest income	**220**
Other non-operating income/(expense), net	**871**
EARNINGS FROM CONTINUING OPERATIONS BEFORE INCOME TAXES	**6,069**
Income taxes on continuing operations	**2,103**
NET EARNINGS FROM CONTINUING OPERATIONS	**3,966**

P&G writes off $6.8 billion of Gillette (Grooming) goodwill

GOODWILL AND INTANGIBLE ASSETS

The change in the net carrying amount of goodwill by reportable segment was as follows:

	Beauty	Grooming	Health Care	Fabric & Home Care	Baby, Feminine & Family Care	Corporate	Total Company
Balance at June 30, 2017 - Net (1)	$ 12,791	$ 19,627	$ 5,878	$ 1,857	$ 4,546	$ —	$ 44,699
Acquisitions and divestitures	82	—	—	—	—	—	82
Translation and other	119	193	51	8	23	—	394
Balance at June 30, 2018 - Net (1)	12,992	19,820	5,929	1,865	4,569	—	45,175
Acquisitions and divestitures	**132**	**—**	**2,084**	**6**	**57**	**—**	**2,279**
Goodwill impairment charges	**—**	**(6,783)**	**—**	**—**	**—**	**—**	**(6,783)**
Translation and other	**(139)**	**(156)**	**(41)**	**(16)**	**(46)**	**—**	**(398)**
Balance at June 30, 2019 - Net (1)	**$ 12,985**	**$ 12,881**	**$ 7,972**	**$ 1,855**	**$ 4,580**	**$ —**	**$ 40,273**

DirecTV is bleeding subscribers and it's dragging AT&T shares lower (CNBC 10/24/2018)

The company's satellite TV division DirecTV reported a staggering 346,000 net loss in subscribers for the quarter. This 2% loss for the quarter is 8% on an annualized basis.

Viewers continue to abandon pricey TV packages in favor of cheaper streaming video services like Netflix and Hulu.

Note:

One might expect an impairment of DirecTV goodwill, but this has not happened.

Because management estimates the value of goodwill, impairment is discretionary.

Takeaways

- Acquisition vs. internal growth – the accounting is different. Understanding purchase accounting is important

  With acquisitions, when you buy intangible assets, they come on balance sheet. When you grow those same intangible assets, within the firm, they don't come onto your balance sheet, because of the differences in how intangibles are treated

- In the U.S. and under IFRS all firms are required to use purchase accounting
  - Basis of assets increased to market value
  - Identifiable intangibles added to balance sheet and amortized

- Goodwill
  - Understanding goodwill
  - How does goodwill arise?
  - When is goodwill impaired?

15.516x Financial Accounting

Financial Investments

John Core
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Finance at MIT
Where ingenuity drives results

Financial Investments – Remaining Agenda

acquisitions are a special case of financial investments

- Understand when accounting departs from the “transactions based” / “historical cost” model and moves towards market-driven valuations
- Understand how financial investments are valued on companies' balance sheets
- Understand how financial investments affect the income statement and cash flow statement of valuation adjustments

When are Changes in Market Value Recognized?

We have covered a variety of transactions related to assets:

- When and how are the market values of assets reflected in the financial statements?

Example: On 1/1/2000, Delta buys a plane for $20 million (0 salvage value, 10 year useful life). What transactions does it record in 2000?

Cash	PPE	– Acc Dep	=	R/E
–20	20			
		2		-2 (Dep exp.)

On 1/1/2001, what transaction does it record if it sells the plane for $20 million?

Cash	PPE	– Acc Dep	=	R/E
20	-20	-2		2 (Gain)

Changes in market value

Clearly market value is used at the time of the acquisition and at the time of sale. It is the period in between where things get complicated…

Lower of Cost or Market ("LCM") – US GAAP

net realizable value

If market value of an asset < its book value, then the firm is obliged to:

- Reduce the book value of the asset
- Recognize a corresponding loss in the income statement

If market value of an asset > its book value, no accounting transaction is recorded.

example

For inventory and PP&E, most firms use LCM for most assets

In this class, we will examine one set of accounting transactions that deviate from the LCM principle: *passively-owned financial assets*

Because passively-owned financial assets have easily determined market values, they can be accounted for at fair value.

What are Financial Investments?

- Financial Investments
  - Common stock (also called “equity”)
  - Corporate bonds
  - Government bonds, treasuries, etc…

- Accounting Questions
  - (Q1) Should changes in market value of financial investments be recorded on the balance sheet?

makes sense to put market values of financial instruments on our balance sheet

- If the answer to (Q1) is yes,
  - (Q2) Should changes in market value be recognized on the income statement?

How Important are Financial Investments?

this company has over 70% of its assets in investments or in financial investments.

Assets	**1-Jul-17**	
Current Assets		
Cash And Cash Equivalents	5.4%	18,571,000
Short Term Investments	16.9%	58,188,000
Net Receivables	6.6%	22,632,000
Inventory	0.9%	3,146,000
Other Current Assets	3.0%	10,338,000
Total Current Assets	**32.7%**	**112,875,000**
Long Term Investments	53.5%	184,757,000
Property Plant and Equipment	8.5%	29,286,000
Goodwill	1.6%	5,661,000
Intangible Assets	0.7%	2,444,000
Other Assets	2.9%	10,150,000
Total Assets	**100.0%**	**345,173,000**

Which company is this? Apple

Why Do Firms have Financial Investments?

- Why do companies hold so much cash/investments?
- Short-term investment of excess cash
  - Financial flexibility
  - Fund future R&D
  - Rainy day money
  - Governance problem?
  - Cash “trapped” overseas due to tax considerations (discussed in later class)
- Strategic alliances / Long-term investments / expansions (e.g., Amazon)

acquisition

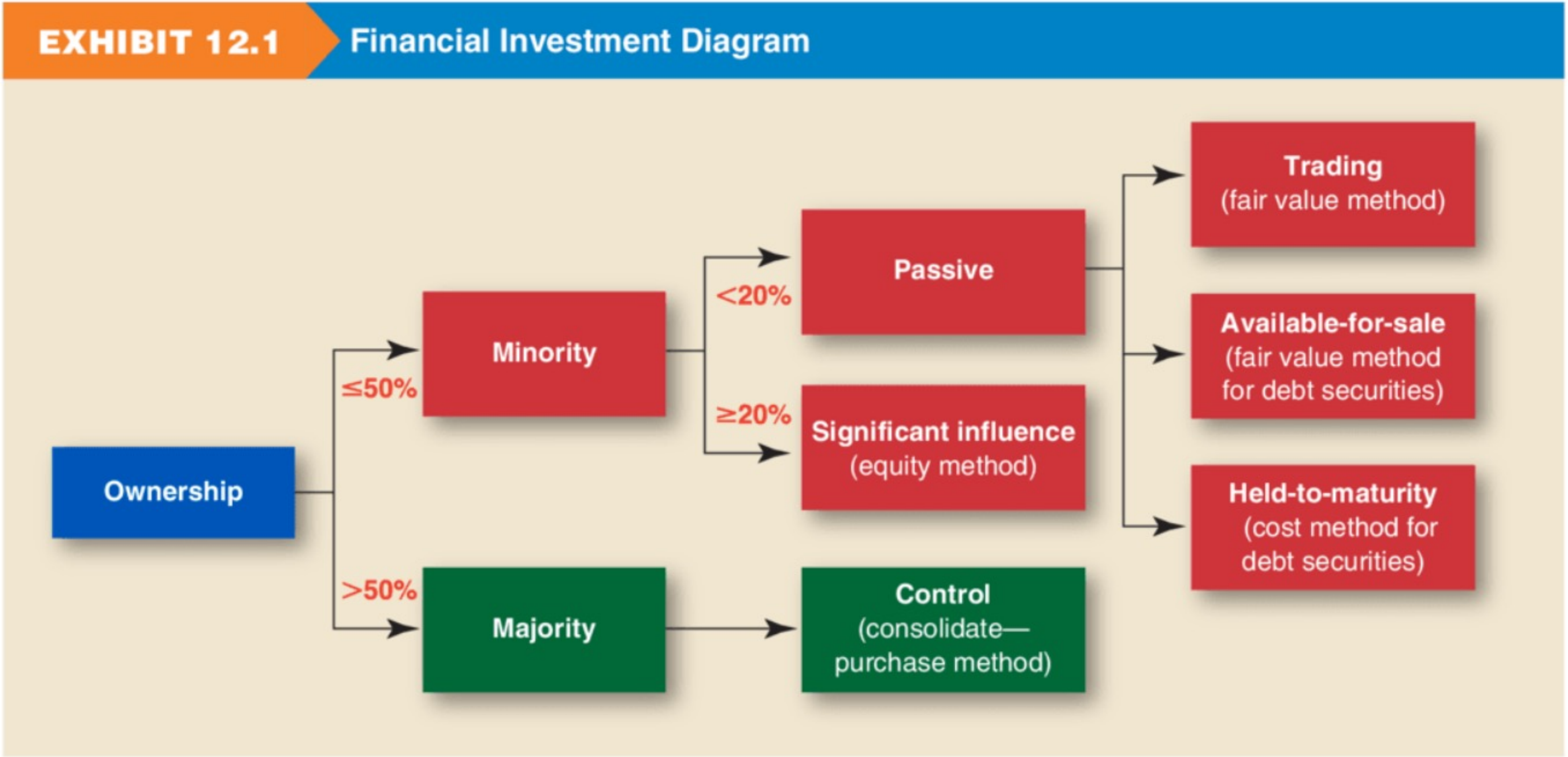
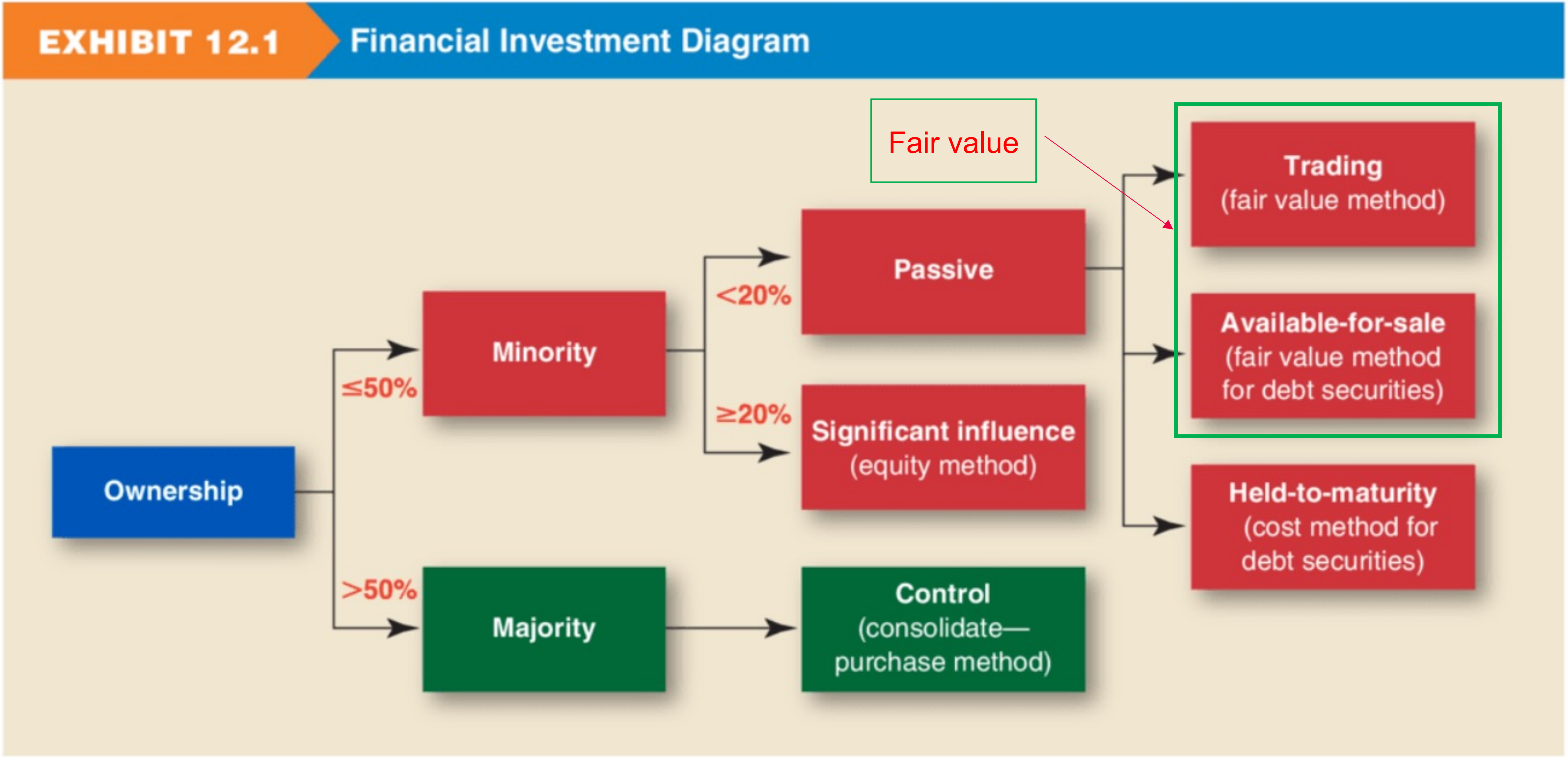


EXHIBIT 12.1
Financial Investment Diagram
Ownership
≤50%
Minority
>50%
Majority
<20%
Passive
≥20%
Significant influence
(equity method)
Control
(consolidate—
purchase method)
Trading
(fair value method)
Available-for-sale
(fair value method
for debt securities)
Held-to-maturity
(cost method for
debt securities)

Fair value vs. historical cost accounting



Passive investments

Statement of Financial Accounting Standard (SFAS) 115 (now modified by ASU 2016-01) requires the firm to classify its securities into 3 categories based on the *intent* of the acquirer:

- **Held-to-maturity (debt only)**
  - Acquired with ability and intent to hold to maturity
- **Trading securities (debt and equity)**
  - Acquired for short-term profit potential
- **Available for sale (debt only)**
  - Securities not classified as either of above
  - Before Dec. 2017: equity could be classified as available for sale

Accounting treatment of unrealized gains/losses varies across categories of passive investments

held-to-maturity is attractive because fluctuations in the market value's security don't show up until you sell the security.

	B/S Effect	I/S Effect
▪ **Held-to-maturity (debt only)**	(Q1) no	
▪ **Available for sale (debt only)**	(Q1) yes	(Q2) no
▪ **Trading securities (debt and equity)**	(Q1) yes	(Q2) yes

Changes in market value affect the balance sheet for available for sale **AND** trading securities

Changes in market value affect the income statement **ONLY** for trading securities

For trading securities, both unrealized and realized gains are reported as part of net income. For available for sale securities, unrealized gains and losses are part of other comprehensive Income. Only realized gains and losses affect net income.

An Illustration:
Trading Security vs. Available for Sale

- On Jan. 1, 2004, Attila is trading at $1,000/bond. Eva acquires 100 bonds
- On Nov. 30, 2004, Eva received $1,250 in interest ($12.50/bond of Attila)
- On Dec. 31, 2004, Attila is trading at $1,050/bond. Eva elects to keep the bonds
- On Dec. 31, 2005, Attila is trading at $1,020/bond. Eva elects to keep the bonds
- On December 31, 2006, Attila is trading at $1,110/bond. Eva sells all of its bonds

An Illustration: Trading Security

On Jan. 1, 2004, Attila is trading at $1,000/bond. Eva acquires 100 bonds

On Nov 30, 2004, Eva received $1,250 in interest ($12.5/bond of Attila)

marketable securities

	Cash	MktSec	OthCI	RE
1/1/2004	(100,000)	100,000		
11/30/2004	1,250			1,250

"OthCI" or Other Comprehensive Income:

does not

- A stockholders' equity account that ~~does~~ affect net income
- Records gains/losses on AFS securities (among others)

An Illustration: Trading Security

On Dec. 31, 2004, Attila is trading at $1,050/bond. Eva elects to keep the bonds

	Cash	MktSec	OthCI	RE
1/1/2004	(100,000)	100,000		
11/30/2004	1,250			1,250
12/31/2004		5,000		5,000 (unrealized gain)

The marketable security is now reported at market value: (1,050 * 100 = 105,000)

Unrealized = bonds not sold
Realized = bonds sold

An Illustration: Trading Security

On Dec. 31, 2005, Attila is trading at $1,020/bond. Eva elects to keep the bonds

	Cash	MktSec	OthCI	RE
1/1/2004	(100,000)	100,000		
11/30/2004	1,250			1,250
12/31/2004		5,000		5,000 (unrealized gain)
12/31/2005		(3,000)		(3,000) (unrealized loss)

Once again, we adjust the security to market value:
(1,020 * 100 = 102,000)

An Illustration: Trading Security

On Dec. 31, 2006, Attila is trading at $1,110/bond. Eva sells all of its bonds

	Cash	MktSec	OthCI	RE
1/1/2004	(100,000)	100,000		
11/30/2004	1,250			1,250
12/31/2004		5,000		5,000 (unrealized gain)
12/31/2005		(3,000)		(3,000) (unrealized loss)
12/31/2006	111,000	(102,000)		9,000 (realized gain)

I Can't See Berkshire's Bottom Line

A new accounting rule makes it difficult for investors to make sense of annual reports. WSJ 11/7/2018

Financial Accounting Standards Board

This year, the FASB decreed that stock gains or losses must be reported as earnings.

all equity securities had to be accounted for as trading securities, stock gains and losses must be reported as earnings.

So Berkshire's reported pretax earnings jumped from $5.3 billion in the third quarter of 2017 to $23 billion in the same quarter of 2018.

Did its earnings quadruple? No, the FASB's new accounting rules forced Berkshire to record $14.6 billion in gains on its stocks.

not its securities portfolio

The meaningful portion of Berkshire's reports is the actual profits of its businesses... But to arrive at that number, I had to look at Berkshire's quarterly report and calculate it myself.

Including gains and losses on trading securities, which are temporary amounts, made it more difficult for investors to see the true performance of companies like Berkshire Hathaway

An Illustration: Available for Sale

On Jan. 1, 2004, Attila is trading at $1,000/bond. Eva acquires 100 bonds

On Nov 30, 2004, Eva received $1,250 in interest ($12.50/bond of Attila)

	Cash	MktSec	OthCI	RE
1/1/2004	(100,000)	100,000		
11/30/2004	1,250			1,250

Note:

AFS and Trading Securities receive identical treatment for the initial purchase and receipts of interest/dividends

An Illustration: Available for Sale

On Dec. 31, 2004, Attila is trading at $1,050/bond. Eva elects to keep the bonds

	Cash	MktSec	OthCI	RE	
			other comprehensive income		
1/1/2004	(100,000)	100,000			
11/30/2004	1,250			1,250	
12/31/2004		5,000	5,000		(unrealized gain)

The marketable security is now reported at market value:
(1,050 * 100 = 105,000)

Prior to sale of AFS securities, increases in value are not reflected in RE and are instead reflected in OthCI

An Illustration: Available for Sale

On Dec. 31, 2005, Attila is trading at $1,020/bond. Eva elects to keep the bonds

	Cash	MktSec	OthCI	RE	
1/1/2004	(100,000)	100,000			
11/30/2004	1,250			1,250	
12/31/2004		5,000	5,000		(unrealized gain)
12/31/2005		(3,000)	(3,000)		(unrealized loss)

Once again we adjust the security to market value:
(1,020 * 100 = 102,000)

An Illustration: Available for Sale

On December 31, 2006, Attila is trading at $1,110/bond. Eva sells all of its bonds

global records in financial statements can not be used when calculating specific transaction!

	Cash	MktSec	OthCI	RE	
1/1/2004	(100,000)	100,000 adjusted cost			
11/30/2004	1,250			1,250	
12/31/2004	unrealized gain/loss	5,000	5,000		(unrealized gain)
12/31/2005		(3,000)	(3,000)		(unrealized loss)
12/31/2006	111,000	(102,000) estimated fair value	(2,000)	11,000	(realized gain)

Realized gain = 9,000 in 2006 + 2,000 in OCI

close out marketable securities

close out other comprehensive income induced by this AFS security (specific OCI)

You should answer questions sequentially, because previous answer is the ladder for next answer.

In practice, selling securities will not close out Accumulated other comprehensive income/(loss) in B/S (total OCI). You should refer to detail OCI sheet for specific item.

Unrealized gains and losses are recorded in MktSec and OthCI (AFS) or MktSec and RE (Trading).

Other Comprehensive Income
(In Intel's 2013 Statement of Stockholders Equity)

available-for-sale securities

Three Years Ended December 28, 2013 (In Millions, Except Per Share Amounts)	Common Stock and Capital in Excess of Par Value: Number of Shares	Common Stock and Capital in Excess of Par Value: Amount	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total
Balance as of December 29, 2012	**4,944**	**19,464**	**(399)**	**32,138**	**51,203**
Components of comprehensive income, net of tax:					
Net income	—	—	—	9,620	9,620
Other comprehensive income (loss)	—	—	1,642	—	1,642
Total comprehensive income					11,262
Proceeds from sales of shares through employee equity incentive plans, net tax deficiency, and other	130	1,593	—	—	1,593
Share-based compensation	—	1,117	—	—	1,117
Repurchase of common stock	(107)	(638)	—	(1,802)	(2,440)
Cash dividends declared ($0.90 per common share)	—	—	—	(4,479)	(4,479)
Balance as of December 28, 2013	**4,967**	**$ 21,536**	**$ 1,243**	**$ 35,477**	**$ 58,256**

See accompanying notes.

Available for Sale Disclosure – Intel

MIT MANAGEMENT SLOAN SCHOOL

Note 5: Cash and Investments

Available-for-Sale Investments

how much they pay for the securities plus any transactions cost

	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
2013	$15,191	$2,902	$(7)	$18,086
2012	$12,927	$1,079	$(5)	$14,001

= 15191 + 2902 - 7

Recorded in other comprehensive income (Equity)

Reported on Balance Sheet as:
Cash equivalents short term investments (less than 12m)
Short-term investments
Marketable equity investments
Other long term investments

Statement of Cash Flows Summary

The acquisition and sales of Financial Investments affect the Statement of Cash Flows

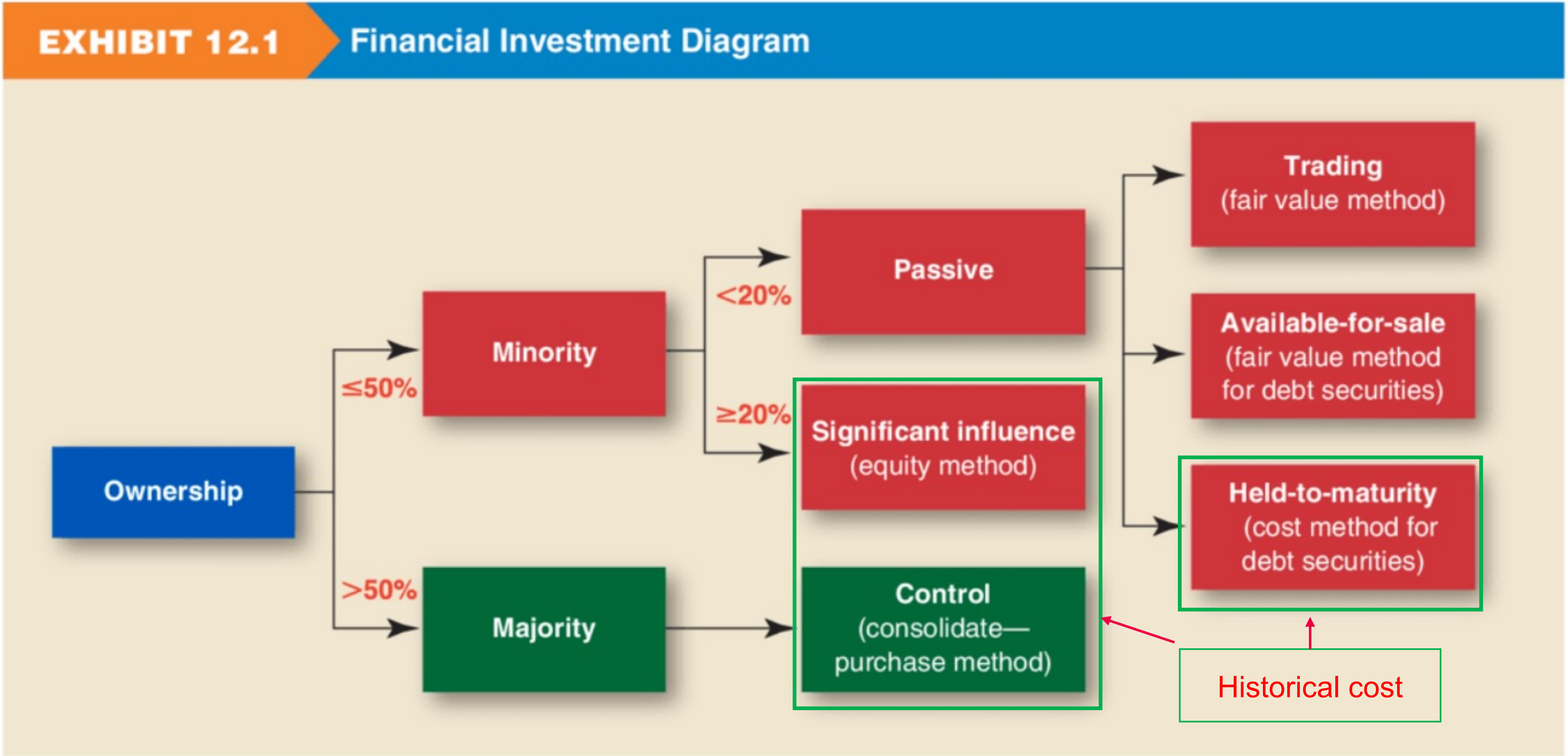
- Transactions in trading securities can be reported in *cash flows from operations and/or cash flows from investment* For a company like Berkshire, it's more likely to be included in CFO whereas for a manufacturer, more likely CFI

available-for-sale

- Transactions in AFS securities should be reported in *cash flows from investments*

Changes in the fair value of trading securities in net income are removed from CFO.
If the gain or loss is unrealized, then there is no cash impact yet

Fair value vs. historical cost accounting



Significant Influence -- Equity Method

- If a firm exerts significant influence over the investee then the firm must use the equity method of accounting
  - 20% to 50% ownership implies significant influence
  - But can have significant influence with less than 20% (e.g., board seat).

Gilead to Boost Stake in Belgian Biotech Galapagos as Part of $5.1 Billion Deal (WSJ 7/15/19)

Gilead Sciences Inc. also will invest $1.1 billion to increase its stake in the drugmaker to 22% from 12.3%. That represents a 20% premium to the 30-day weighted average share price of Galapagos.

Gilead will get two seats on Galapagos's board of directors as part of the deal.

The Equity Method

- Initially record the investment at acquisition cost.
- Adjust the book value of the investment by the investor's share of dividends and earnings or losses.
- Record investor's share of investee's profit on the investor's income statements.
- Dividends received reduce investment; they do not give rise to dividend income.

unlike trading securities and AFS

Equity Method: Example

- On January 1, 2010, Zsa Zsa purchased 1,000 shares of Zoltan common stock for $15 cash per share. This 1,000 shares represents a 30% interest in Zoltan.
- Zoltan's book value per share is $10. Zsa Zsa is paying a premium because it believes that Zoltan has unrecorded patents (with a life of 10 years) of $5 per share.
- On June 30, Zsa Zsa received a dividend of $1 per share on Zoltan common stock.
- At December 31, 2010 the market price of Zoltan common stock is $13 per share.
- Zoltan reports its earnings for 2010 as $20,000.
- Zsa Zsa sells the 1,000 shares of Zoltan common stock on June 30, 2011 for $17 per share.

Equity Method: Example

- On January 1, 2010, Zsa Zsa purchased 1,000 shares of Zoltan common stock for $15 cash per share. These 1,000 shares represents a 30% interest in Zoltan.

	Cash	Investment	RE	Notes
1/1/2010	(15,000)	15,000		

Equity Method: Example

- On June 30, Zsa Zsa received a dividend of $1 per share on Zoltan common stock.

	Cash	Investment	RE	Notes
1/1/2010	(15,000)	15,000		
6/30/2010	1,000	(1,000)		

Equity Method: Example

- At December 31, 2010 the market price of Zoltan common stock is $13 per share.
- No entry

	Cash	Investment	RE	Notes
1/1/2010	(15,000)	15,000		
6/30/2010	1,000	(1,000)		

Equity Method: Example

- Zoltan reports its earnings for 2010 as $20,000.

	Cash	Investment	RE	Notes
1/1/2010	(15,000)	15,000		
6/30/2010	1,000	(1,000)		
12/31/2010		6,000	6,000	20,000 X 0.30

Equity Method: Example

- Zsa Zsa amortizes the unrecorded patents (with a life of 10 years) of $5 per share.

	Cash	Investment	RE	Notes
1/1/2010	(15,000)	15,000		
6/30/2010	1,000	(1,000)		
12/31/2010		6,000	6,000	20,000 X 0.30
12/31/2010		(500)	(500)	$5 / 10 X 1,000

Facebook / WhatsApp Pro Forma income statement from earlier class

	Historical			
	Facebook, Inc.	WhatsApp Inc.	Pro Forma Adjustments	Pro Forma Combined
Revenue	$ 5,412	$ 15	$ —	$ 5,427
Costs and expenses				
Cost of revenue	936	44	11 (c) (h)	991
Research and development	947	68	483 (c) (h)	1,498
Marketing and sales	681	—	231 (c) (h)	912
General and administrative	384	135	(12) (h) (i)	507
Total costs and expenses	2,948	247	713	3,908
Income (loss) from operations	2,464	(232)	(713)	1,519
Interest and other income/(expense), net	(4)	(1)	—	(5)
Income (loss) before provision for income taxes	2,460	(233)	(713)	1,514
Provision for income taxes	1,027	—	(275) (j)	752
Net income (loss)	$ 1,433	$ (233)	$ (438)	$ 762

Includes amortization of intangibles. If Facebook had bought 30% at same price, amortization would be 30% of this number.

Equity Method: Example

- Zsa Zsa sells the 1,000 shares of Zoltan common stock on June 30, 2011 for $17 per share.

	Cash	Investment	RE	Notes
1/1/2010	(15,000)	15,000		
6/30/2010	1,000	(1,000)		
12/31/2010		6,000	6,000	20,000 X 0.30
12/31/2010		(500)	(500)	$5 / 10 X 1,000
6/30/2011	17,000	-19,500	-2,500	

Control -- Consolidation

- If a firm exerts control over the investee then the firm report consolidated financial statements.
  - 50% and above ownership implies control.

- Consolidation accounting:
  - Replace the investment balance with investee's assets and liabilities to which it relates.
  - Replace the firm's portion of reported income of the investee with investee's sales and expenses to which it relates.
  - Eliminate intercorporate transactions. if the investee and the investor sell stuff to each other,

DirecTV balance sheet after acquisition

	Pre-Acquisition B/S	Change	Post-Acquisition B/S
Cash	5,061		5,061
Other Tangible Assets	15,429	-486	14,943
Intangible Assets	946	35,249	36,195
Goodwill	3,885	30,542	34,427
Total assets	25,321	65,305	90,626
-Total liabilities	-28,784	-14,079	-42,863
Book value of net assets (SE)	-3,463	51,226	47,763

AT&T unconsolidated balance sheet after acquisition

made a $48 billion investment in DIRECTV and paid for it with $14 billion in cash and $33 billion in stock

	Pre-Acquisition B/S	Change	Post-Acquisition B/S
Cash	20,956	-14,378	6,578
Investment in DirectTV		47,763	47,763
Other Tangible Assets	147,306		147,306
Intangible Assets	87,307		87,307
Goodwill	70,920		70,920
Total assets	326,489		359,874
-Total liabilities	-238,988		-238,988
Book value of net assets	87,501	33,384	120,886

AT&T / DirecTV Consolidated Balance Sheet

	Balance Sheets After Acquisition			
	AT&T	DirecTV	Consolidating Adj.	AT&T Consolidated
Cash	6,578	5,061		11,639
Investment in DirecTV	47,763		-47,763	
Other Tangible Assets	147,306	14,943		162,249
Intangible Assets	87,307	36,195		123,502
Goodwill	70,920	34,427		105,347
Total assets	359,874	90,626		402,737
-Total liabilities	-238,988	-42,863		-281,851
Book value of net assets	120,886	47,763	-47,763	120,886

Intercompany Elimination – Parent owns 100% of Sub (similar to DirecTV)

	Parent	Liab/ Assets	Subsidiary	Consolidating Adjustments	Consolidated	Liab/ Assets
Current Assets	10,000		2,000			
Investment in Sub	4,000		0			
PPE, net	10,000		6,000			
Total Assets	24,000		8,000			
Liabilities	8,000	33%	4,000			
Contributed Capital	2,000		1,000			
Retained Earnings	14,000		3,000			
Total L & E	24,000		8,000			

Intercompany Elimination – Parent owns 100% of Sub (similar to DirecTV)

	Parent	Liab/ Assets	Subsidiary	Consolidating Adjustments	Consolidated	Liab/ Assets
Current Assets	10,000		2,000		12,000	
Investment in Sub	4,000		0	(4,000)	0	
PPE, net	10,000		6,000		16,000	
Total Assets	24,000		8,000		28,000	
				eliminate the subsidiary stockholders' equity		
Liabilities	8,000	33% leverage ratio:	4,000 50%		12,000	43%
Contributed Capital	2,000		1,000	(1,000)	2,000	
Retained Earnings	14,000		3,000	(3,000)	14,000	
Total L & E	24,000		8,000		28,000	

What if Parent owns less than 100% of Subsidiary?

What if Parent owns less than 100% of Subsidiary?

- Balance Sheet:
  - Consolidate 100% of Subsidiary's individual assets and liabilities and use offsetting account "Noncontrolling Interest in Equity of Subsidiary"

- Income Statement:
  - Consolidate 100% of Subsidiary's individual revenues and expenses and use offsetting account "Noncontrolling Interest in Earnings of Subsidiary"

Note: "Noncontrolling Interest" means the same as "Minority Interest"

Intercompany Elimination – Parent owns 50% of Sub (sells 50% of sub in prior example for $2,000 cash)

	Parent	Subsidiary	Consolidating Adjustments	Consolidated	Liab/ Assets
Current Assets	12,000	2,000		14,000	
Investment in Sub	2,000	0	(2,000)	0	
PPE, net	10,000	6,000		16,000	
Total Assets	24,000	8,000		30,000	
Liabilities	8,000	4,000		12,000	40%
Contributed Capital	2,000	1,000	(1,000)	2,000	
Retained Earnings	14,000	3,000	(3,000)	14,000	
Noncontrolling interest			2,000	2,000	
Total L & E	24,000	8,000		30,000	

Intercompany Elimination – Parent owns 49% of Sub (sells 1% of sub in prior example for $40 cash)

	Parent	Subsidiary	Consolidating Adjustments	Consolidated	Liab/ Assets
Current Assets	12,040	2,000	-2,000	12,040	
Investment in Sub	1,960	0	0	1,960	
PPE, net	10,000	6,000	-6,000	10,000	
Total Assets	24,000	8,000	-8,000	24,000	
use equity method accounting, not consolidated accounting					
Liabilities	8,000	4,000	-4,000	8,000	33%
Contributed Capital	2,000	1,000	-1,000	2,000	
Retained Earnings	14,000	3,000	-3,000	14,000	
Noncontrolling interest			liability of highly levered subsidiary is not included in parent B/S, so leverage ratio drop		
Total L & E	24,000	8,000	-8,000	24,000	

Coca Cola's "49% solution"

As chief financial officer in 1986, Ivester devised the financial underpinnings of "the 49% solution."

take it back just a little bit and have only 49% of the ownership, so we no longer have to consolidate. So we no longer put the assets and liabilities on the balance sheet

This innovative deal turned out to be the bedrock of Coke's global strategy, not to mention a potent stimulus to its stock price.

Coke bought a bunch of U.S. bottlers that weren't performing well and combined them with its own bottling network, calling the new outfit Coca-Cola Enterprises (CCE).

Then it spun CCE off to the public but kept 49% of the stock and the right to throw its weight around.

Simultaneously—here's the magic—Coke washed billions of dollars in debt and a low-return, capital-hungry business off its books.

Take Away Slide 1

- Passive investments – mark-to-market
- With some but not complete control – equity method
- Greater than 50% ownership – consolidate

- Whether it is equity or consolidated method makes a big difference on the appearance of the statements. Financial ratios (leverage ratios) will be very different.

Take Away Slide 2

- When there are changes in market values, accountants make valuation adjustments
  - For inventory and PP&E, use lower of cost or market (LCM) impair of PPE
  - For large investments (20% +), ~~use lower of cost or market~~ (LCM) equity method of accounting or consolidation method of accounting
  - For passive investments (<20%), use mark-to-market accounting trading securities or available for sale securities
    - Balance Sheet reflects market value of investments
    - Type of security determines effect on Net Income
      - On trading securities both unrealized and realized gains are reported as part of Net Income
      - On available for sale securities unrealized gains and losses are part of Other Comprehensive Income. Only realized gains and losses affect Net Income.