A Simple Model

Projecting Stockholders' Equity: Home Depot 2012

NOTES TO ACCOMPANY VIDEOS

These notes are intended to supplement the videos on ASimpleModel.com. They are not to be used as stand-alone study aids, and are not written as comprehensive overviews of the topic detailed. The purpose of these notes is to provide a tangible collection of the visuals used in the videos with comments highlighting the more important aspects covered.

VOCABULARY REVIEW: Reminders relevant to this video.

Cash Dividends:

1. There will be many references to dividends in this video. Please review the video titled "Cash Dividends in a Financial Model" and the associated notes before proceeding.
    a. The Dividend Payout Ratio is also addressed in this video.

Effects of Exchange Rates in Cash:

1. From the HD annual report: "Foreign Currency Translation: Assets and liabilities denominated in a foreign currency are translated into U.S. dollars at the current rate of exchange on the last day of the reporting period. Revenues and expenses are generally translated using average exchange rates for the period and equity transactions are translated using the actual rate on the day of the transaction."
2. In this model we will not concern ourselves with an attempt to project this line item.

Earnings Per Share (EPS):

1. EPS is a measure of profitability applied to each individual share of the company.
    a. For an example from Joel Greenblatt, assume an opportunity to purchase shares of a fictional company for $12 per share: "[Business Owner] has divided his business into one million equal shares. That means, if the whole business earned $1,200,000, each share earned one-millionth of that amount. Since $1,200,000 divided by 1,000,000 is $1.20, each $12 share was entitled to $1.20 in earnings."[1]
    b. Quick thought exercise: What additional information would you require to make the decision to invest? Hint: Will the company continue to make that amount per share? Will EPS grow in the future?
2. Because the number of shares can change from one accounting period to the next, it is common to see a weighted average used for the number of shares outstanding.

Price-Earnings Ratio (P/E Ratio):

1. Market Value per Share / Earnings per Share (EPS)
    a. From the example provided above: P/E Ratio = $12.00 / $1.20 = 10.00
2. Multiples of earnings are used frequently in valuation, and the price-earnings ratio is among the most frequently used.

Repurchase of Common Stock:

1. The repurchase of common stock by the company.

To provide greater context, I thought I would include an example of share repurchases in action from *The Outsiders: Eight Unconventional CEOs and Their Radically Rational Blueprint for Success*. The passage that follows describes a strategy employed by Henry Singleton who ran Teledyne for nearly 30 years.

> "Singleton believed repurchases were a far more tax-efficient method for returning capital to shareholders than dividends, which for most of his tenure were taxed at very high rates. Singleton believed buying stock at attractive prices was self-catalyzing, analogous to coiling a spring that at some future point would surge forward to realize full value, generating exceptional returns in the process. These repurchases provided a useful capital allocation benchmark, and whenever the return from purchasing his stock looked attractive relative to other investment opportunities, Singleton tendered for his shares.
>
> Repurchases became popular in the 1990s and have frequently been used by CEOs in recent years to prop up sagging stock prices. Buybacks, however, add value for shareholders only if they are made at attractive prices. Not surprisingly, Singleton bought extremely well, generating an incredible 42 percent compound annual return for Teledyne's shareholders across the tenders."[2]

	1971	1984	Change
Sales	$1,101.9	$3,494.3	2.2 times
Net Income	$32.3	$260.7	7.1 times
Earnings Per Share	$8.55	$353.34	40.3 times
Shares Outstanding	6.6	0.9	(0.9 times)

I have always really enjoyed this table, which was also published in *The Outsiders.* It does a tremendous job of effectively demonstrating how Singleton's brilliant capital allocation strategies created tremendous value for shareholders. Notice that while the company's financial performance improves, the majority of the value creation (increase in EPS) is derivative of the reduction in the number of shares outstanding.

Shares Outstanding (Basic vs. Diluted):

1. This represents the number of shares that a company has **issued**.
2. Basic shares outstanding represents the number of shares currently held by all of the company's shareholders.
3. Diluted shares outstanding adds to the number of basic shares outstanding all potential additional sources of shares such as convertible securities and stock options.
    a. For example, if an employee has in-the-money options that have not yet been exercised, the number of shares would be included in the total for diluted shares outstanding.

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Stock-Based Compensation and **Options Proceeds** can appear to be fairly abstract concepts. So I tried to come up with the most simple example to illustrate (literally) the meaning, and give you a better idea of what you are projecting when you build financial models.

FIGURE 1: In this example we will assume that you are the human pictured to the right, and that as an incentive to get you to stick around, your company has awarded you a stock option. A few things to keep in mind as we work through this:

1. The day the stock option is awarded is known as the "Grant Date."
2. The value (to you) of this stock option is determined using the "fair-value-based method" (Fair Value), which is generally determined using an options-pricing model.
3. The period of time you have to wait until you can recognize that value is known as the vesting period (in this example 5 years).
4. Finally, in this example we will assume that the current share price of the company employing you is $150.

FIGURE 2: Over the course of the vesting period the company is required to record the fair value as an expense on the income statement. This is the period over which you "earn" the fair value. Since it is earned over 5 years, in figure 2 you will see the company recording an expense of $20 ($100/5) in each period. This expense, however, is a non-cash item. It must therefore be added back on the cash flow statement under stock-based compensation expense.

FIGURE 3: At the conclusion of 5 years you can "exercise" the option to buy the stock at the share price from 5 years before (the price of the stock on the Grant Date). In other words, if you choose to exercise your stock option at the conclusion of the vesting period, you will pay $150 for a share of the company now (5 years later) valued at $250. The $150 dollar sum you pay the company in exchange for the share is known as the "options proceeds."

1 Grant Date

Fair Value = $100

Vesting Period = 5 years

Share Price = $150

Note: "The fair value of an award [stock option in this example] is the cost to the company of granting the award and should reflect the estimated value that the company would be obligated to provide when an employee is entitled to the award and is no longer required to provide service to the employer. For most awards, fair value will be measured once at the grant date and will not be adjusted for subsequent changes."
-PWC 2013

2 Reporting Periods

Income Statement

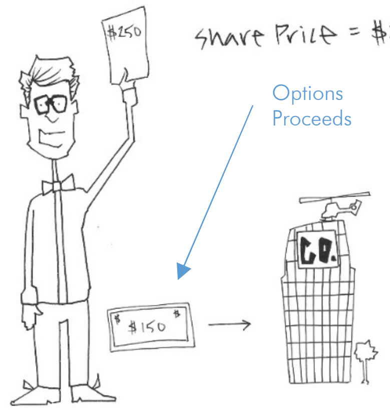
	1	2	3	4	5
Revenue					
Expenses	20	20	20	20	20
Net Income	-20	-20	-20	-20	-20

Cash Flow Statement

Net Income	-20	-20	-20	-20	-20
Add Back Non-Cash Items					
Stock Based Compensation Exp.	20	20	20	20	20
:					
Net Cash Flow	0	0	0	0	0

3 Exercise Option

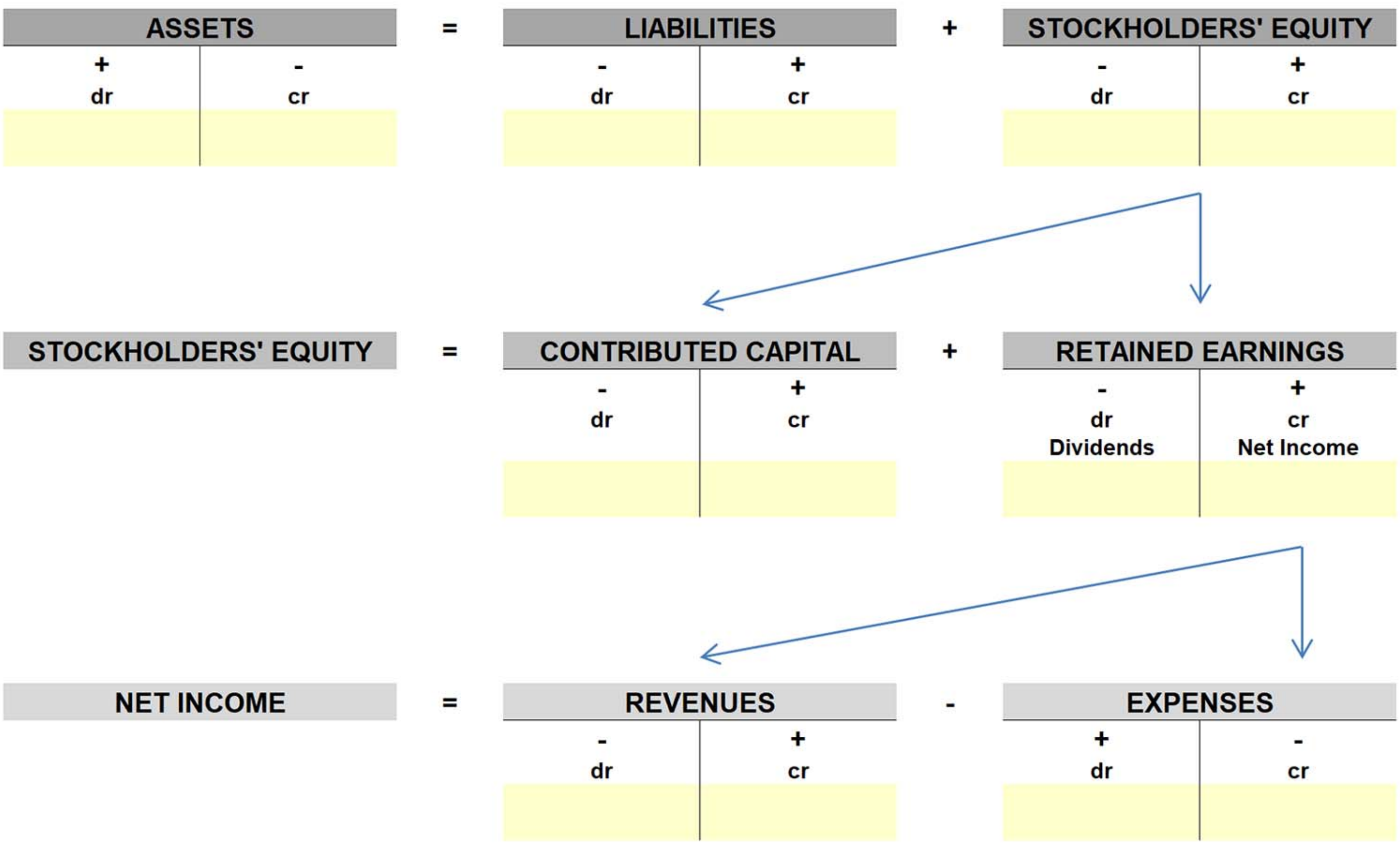
Share Price = $250 Now (5 yrs later)



I have found it can be helpful to reference the accounting equation when working through the transactions that increase or decrease the value of stockholders' equity.

For example, you will note that dividends reduce the value of the retained earnings account, and that a reduction in retained earnings reduces the value of stockholders' equity.

For this reason I am including it on a separate page as a reference.



From this point forward the notes will address content discussed in the video.

Structure of the Exercise:

To avoid scrolling up and down throughout the video, we have created a new template that includes only the information required from the model ("Income Statement Data" and "Balance Sheet Data" in the image below), and the new supporting schedules ("Stockholders' Equity Schedule" and "Shares Outstanding Schedule").

Integrated Financial Statements

The Home Depot, Inc.

amounts in millions, except per share data

	Historical	*Historical*	*Projected*	*Projected*	*Projected*	*Projected*	*Projected*
INCOME STATEMENT DATA	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Net Income	**3,883**	**4,535**	**4,705**	**4,975**	**5,209**	**5,376**	**5,535**
Earnings Per Share	$ 2.47	$ 3.00	$ 3.22	$ 3.53	$ 3.83	$ 4.10	$ 4.39
BALANCE SHEET DATA	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
TOTAL EQUITY	**17,898**	**17,777**					
STOCKHOLDERS' EQUITY SCHEDULE	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Beg: Equity Balance							
Net Income							
Stock-Based Compensation Expense							
Repurchase of Common Stock							
Option Proceeds							
Cash Dividends							
Effects of Exchange Rates in Cash [Foreign Currency Adj.]							
End: Equity Balance							
Share Repurchase Assumptions							
Current Year EPS							
Assumed Current Year P/E Multiple							
Projected Share Price							
Shares Repurchased (millions)							
Repurchase of Common Stock ($)							
New Shares from Exercised Options							
New Shares Issued from Options							
Average Strike Price							
Option Proceeds							
Dividend Assumptions							
Net Income							
Cash Dividend Payout Ratio							
Cash Dividends							
SHARES OUTSTANDING SCHEDULE	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Beg: Basic							
Shares Issued from Options							
Shares Repurchased							
End: Basic							
Average Basic Shares							
Dilutive Effects							
Average Diluted Shares							

The color coding is used to demonstrate how each of the line items is calculated. It might be helpful to think of these shaded regions as supporting schedules within a supporting schedule.

Input Historical Data (listed in the order provided in the financial model):

Stock-Based Compensation Expense ("Stock Options, Awards and Amortization of Restricted Stock" in Annual Report)

- Stock-Based Compensation Expense (dollars): $218 million
  - Note: This can also be found on the Cash Flow Statement.

Repurchases of Common Stock (Identical to Annual Report)

- Shares Repurchased (shares): 74 million
- Shares Repurchased (dollars): $4,000 million

Options Proceeds ("Shares Issued Under Employee Stock Plans" in Annual Report)

- Shares Issued (shares): 21 million
- Options Proceeds (dollars): $679 million

Cash Dividends (Identical to Annual Report)

- Cash Dividends (dollars): $1,743 million

THE HOME DEPOT, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

amounts in millions, except per share data	Common Stock Shares	Common Stock Amount	Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock Shares	Treasury Stock Amount	Stockholders' Equity
Balance, January 29, 2012	**1,733**	**$ 87**	**$ 6,966**	**$ 17,246**	**$ 293**	**(196)**	**$ (6,694)**	**$ 17,898**
Net Earnings	—	—	—	4,535	—	—	—	4,535
Shares Issued Under Employee Stock Plans	21	1	678	—	—	—	—	679
Tax Effect of Stock-Based Compensation	—	—	82	—	—	—	—	82
Foreign Currency Translation Adjustments	—	—	—	—	100	—	—	100
Cash Flow Hedges, net of tax	—	—	—	—	5	—	—	5
Stock Options, Awards and Amortization of Restricted Stock	—	—	218	—	—	—	—	218
Repurchases of Common Stock	—	—	—	—	—	(74)	(4,000)	(4,000)
Cash Dividends ($1.16 per share)	—	—	—	(1,743)	—	—	—	(1,743)
Other	—	—	4	—	(1)	—	—	3
Balance, February 3, 2013	**1,754**	**$ 88**	**$ 7,948**	**$ 20,038**	**$ 397**	**(270)**	**$ (10,694)**	**$ 17,777**

See accompanying Notes to Consolidated Financial Statements.

Projecting Repurchase of Common Stock:

STOCKHOLDERS' EQUITY SCHEDULE	2011	2012	2013	2014	2015	2016	2017
Beg: Equity Balance							
Net Income							
Stock-Based Compensation Expense							
Repurchase of Common Stock							
Option Proceeds							
Cash Dividends							
Effects of Exchange Rates in Cash [Foreign Currency Adj.]							
End: Equity Balance	**17,898**	**17,777**					
Share Repurchase Assumptions							
Current Year EPS			$ 3.22	$ 3.53	$ 3.83	$ 4.10	$ 4.39
Assumed Current Year P/E Multiple			20.0x	20.0x	20.0x	20.0x	20.0x
Projected Share Price			=G27*G28	$ 70.52	$ 76.54	$ 82.01	$ 87.79
Shares Repurchased (millions)	97	74	60	60	60	60	60
Repurchase of Common Stock ($)	3,501	4,000	3,864	4,231	=I29*I30	4,921	5,268

This might appear complex on account of the number of line items listed, but this is really limited to two assumptions:

1. The value of common stock in the projected period (Projected Share Price).
2. The number of shares the company will repurchase in the future.

The product of these two variables gives us the value of the shares repurchased ("Repurchase of Common Stock ($)" in the model).

Projected Share Price: To calculate the value of common stock in the projected period we will use earnings per share (EPS) and a projected P/E Ratio (in this example we use the most recent P/E ratio for the projected period). With these values projected the calculation for share price is straightforward:

- EPS * P/E Ratio = Share Price

Shares Repurchased: Developing an assumption for projected shares repurchased can be difficult without company guidance. Fortunately some information surrounding a share repurchase program is provided in the annual report. In this example we assume 60 million shares will be repurchased in each projected period.

Repurchase of Common Stock ($) = Projected Share Price * Shares Repurchased

Keep in mind that this is a cash outflow. The company is using cash to buy in shares.

Thought Exercise: When would a shareholder find this attractive? What might make a shareholder think the company was making a mistake by buying in shares?

Projecting Options Proceeds:

Before revisiting the model, be sure to review the illustrated example included in the definitions introducing the notes. Should some additional wording help, the illustration walks through the following:

This is effectively a call option on the company's common stock granted to an employee as a form of non-cash compensation. Generally this is done to incentivize employees over the longer term, and to align employees with the share price performance of the company.

To make the numbers easy to follow, assume that the employee is awarded a stock option with an exercise price of $150, and that this option vests in 5 years. When the option is exercised it means that the employee has exercised his / her right to purchase the common stock of the company at the strike price (again, $150). The employee is therefore the beneficiary of any appreciation in share price.

If the company's stock is trading at $250 dollars when the employee exercises his / her option, then he / she would have the right to purchase a $250 share from the company for $150. The $150 paid to the company are the options proceeds.

It follows that to calculate options proceeds for the projected period, we need the number of shares issued to employees as options, and the price at which these options will be exercised.

New Shares from Exercised Options							
New Shares Issued from Options	11.0	21.0	10.0	10.0	10.0	10.0	10.0
Average Strike Price			$ 38.24	$ 38.24	$ 38.24	$ 38.24	$ 38.24
Option Proceeds	197	679	=G34*G35	382	382	382	382

Options Proceeds = New Shares Issued from Options * Average Strike Price

Projecting Cash Dividends:

This is covered in the video titled "Cash Dividends in a Financial Model" and the associated notes.

Projecting Shares Outstanding:

Some annual reports contain more detail surrounding stock-based compensation, which can make the process more involved, but Home Depot's annual report provides a schedule permitting we make a simple assumption.

10. BASIC AND DILUTED WEIGHTED AVERAGE COMMON SHARES

The reconciliation of basic to diluted weighted average common shares for fiscal 2012, 2011 and 2010 was as follows (amounts in millions):

	Fiscal Year Ended		
	February 3, 2013	January 29, 2012	January 30, 2011
Weighted average common shares	**1,499**	1,562	1,648
Effect of potentially dilutive securities:			
Stock Plans	**12**	8	10
Diluted weighted average common shares	**1,511**	1,570	1,658

To calculate basic weighted average shares outstanding, we start with the previous years ending balance and add Shares Issued from Options and subtract Shares Repurchased. Then, to calculate diluted weighted average shares outstanding, we add the "Effect of potentially dilutive securities: Stock Plans."

Share Repurchase Assumptions							
Current Year EPS			$ 3.22	$ 3.53	$ 3.84	$ 4.18	$ 4.54
Assumed Current Year P/E Multiple			20.0x	20.0x	20.0x	20.0x	20.0x
Projected Share Price			$ 64.40	$ 70.55	$ 76.81	$ 83.54	$ 90.84
Shares Repurchased (millions)	97	74	60	60	60	60	60
Repurchase of Common Stock ($)	3,501	4,000	3,864	4,233	4,608	5,012	5,451
New Shares from Exercised Options							
New Shares Issued from Options	11.0	21.0	10.0	10.0	10.0	10.0	10.0
Average Strike Price			$ 38.24	$ 38.24	$ 38.24	$ 38.24	$ 38.24
Option Proceeds	197	679	382	382	382	382	382
Dividend Assumptions							
Net Income	3,883	4,535	4,705	4,977	5,227	5,476	5,728
Cash Dividend Payout Ratio	42.0%	38.4%	30.0%	30.0%	30.0%	30.0%	30.0%
Cash Dividends	1,632	1,743	1,411	1,493	1,568	1,643	1,718
SHARES OUTSTANDING SCHEDULE	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Beg: Basic			1,499	1,449	1,399	1,349	1,299
Shares Issued from Options			=G291	10	10	10	10
Shares Repurchased			(60)	(60)	=-I287	(60)	(60)
End: Basic		1,499	1,449	1,399	1,349	1,299	1,249
Average Basic Shares		1,499	1,449	1,399	1,349	1,299	1,249
Dilutive Effects		12	12	12	12	12	12
Average Diluted Shares		1,511	1,461	1,411	1,361	1,311	1,261

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The remainder of the video is focused on linking the relevant line items from the stockholder's equity schedule to the model. This is a simple process that does not benefit from a printed visual aid because the model is too large to fit on a single page.

Please note that the figures for net income change slightly from the tab titled "Vid 8" to the tab titled "Home Depot" (the last two in the series). This is on account of a change I made to the model post video production (Link).

Footnotes (that conveniently double as book recommendations):

1. Greenblatt, Joel *The Little Book That Still Beats the Market.* (New Jersey: John Wiley & Sons, 2010), p. 22
2. Thorndike, William *The Outsiders*. (Massachusetts: Harvard Business School Publishing, 2012), p. 47