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Leverage Buy-out Case Study

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ADMN 799: Honors Thesis

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Content:

Case Analysis: The LBO Deal Dell- Silver Lake

1.0 Introduction

Under the sponsorship and guidance of Professor John Hasseldine, I was able to start working on this Honors Thesis titled: "A Case Study of Leveraged Buy-Outs" during the Summer and Fall Semester of 2013. I managed to build a financial model of the LBO deal between Dell and Silver Lake thanks to the help of my director and colleagues in the Investment Banking department during my summer internship at Ho Chi Minh Securities Corporation. I also followed the specific and detailed instructions from the Financial Modeling Course "Breaking into Wall Street", which was the core to my success in building and understanding this model.

1.1 Motivation for Thesis

With my Accounting and Finance degree from University of New Hampshire, I am aspiring to work in a professional field where I can best apply my knowledge. My interest in investment banking and M&A transactions stem from the well-known book "Monkey Business- Swinging through the Wall Street Jungle". Despite the harsh reality depicted in the book, investment banking ignites my curiosity to break into this industry. My interest in this field was reinforced throughout my investment banking internship with Ho Chi Minh Securities Corporation. One of my most difficult tasks I was held responsible for was to build a valuation model (Discounted Cash Flow model and Public Trading Comparables Analysis) for Viet Thai International Group to assist in its sale of the two divisions: Consumer Lifestyle and SuperFood to foreign companies in Thailand and Hong Kong. As an intern, I was also enrolled in Breaking into Wall Street's Financial Modeling self- study course. Throughout the course, I scrutinized its detailed instructions on how to set up financial models and picked up a lot of information and technical skills on how to evaluate a company during M&A deals and in this specific case study, the Dell-

Silver Lake LBO deal. Investment banking requires a very strong knowledge and background in accounting, therefore, conducting this case study is a very effective way for me to solidify as well as improve my accounting and finance skills.

For the summer of 2014 after my graduation, I will be interning for PricewaterhouseCoopers in their Tax practice and most of my time will be spent in the Financial Services – Alternative group, where I will be conducting securities analysis and filing tax forms for clients in the Asset Management Industry: Hedge funds, Mutual Funds and Private Equities. After the internship, due to its flexibility, there might be demand in PwC's Transaction Advisory Services/ Management Consulting practice. If I am given the opportunity to extend my work to a full time offer and be able to rotate into new different groups, my experience in Investment Banking will help me transition into PwC's TAS group much smoother. This LBO case study will help me gain more knowledge in the buy side of the finance world and enable me to showcase my research, writing and technical skills.

1.2 Background on the deal

Since the financial crisis began in 2007/2008, the trend of large buyout deals started to halt. Therefore, the $24 billion LBO deal between Dell and Silver Lake is one of the most current high profile deals. It was announced on February 5, 2013 and the deal was eventually completed on October, 29, 2013 with the total value was estimated to be at $24.9 billion. The unusual deal structure comes from the fact that Michael Dell, the founder, owned 15% of the company and he intended to roll over his stake, making the buyout for 85% of the company rather than the usual 100%. The most difficult aspect in building this model is the capital structure due to the huge amount of cash overseas in addition to Michael Dell's rollover.

Since they have a large cash balance on their Balance Sheet, which is around 50% of the deal value itself, to fund the deal, they are going to end up using a lot of the cash to fund the transaction directly and effectively buy their own shares with that amount of cash.

One of the difficulties of building this LBO model as mentioned above is computing the complex debt structure, with the contribution from Silver Lake, and combined with the fact that this business is rolling over some shares and the repatriation of some of that overseas cash. Another obstacle in constructing the model is the challenges posed from the projection of revenue and expenses for Dell since the company has many different business lines, some of which are declining like the revenues from desktops and notebooks business unit. However, other lines are experiencing growth such as servers, networking, and some of Dell's software divisions and its goal is to turn itself around by moving away from its declining desktop PC and notebook businesses and re-orienting itself toward software, services and tablets. Consideration will have to be given to different revenue and expense scenarios on a segment by segment basis. The deal also stood out for a few other various reasons:

- Microsoft, who is a key strategic partner of Dell, joined the deal with a $2 billion subordinated loan. This is unlikely for strategic partners to act this way by investing in the capital structure of partner companies that are being taken private.
- A letter from Southeastern Asset Management, one of Dell's largest shareholders, was published, stating the controversy that they believe Dell shares should be worth at least $24 per share instead of the $13.65 per share offer from Silver Lake.
- Acquisitions play a major role in this deal as Dell is not likely to turn itself around from internal factors such as its organic growth. Therefore, an analysis of potential post-buyout

acquisitions is needed and the margin and growth profiles are required for Silver Lake to obtain an acceptable IRR.

There will be 5 main parts in building this LBO Model:

Part 1: Data Mining, Capital Structure and Model Setup

Part 2: Creating different Revenue and Expense scenarios.

Part 3: Completing Debt Schedules and LBO Analysis

Part 4: Building in support for Post – LBO Add-on Acquisitions

Part 5: Calculating Returns and Summary/Conclusion of Deal

In Part 1, "Transaction Assumptions," "Debt Assumptions," "Sources and Uses," "Ownership Percentages" and "Goodwill Creation and Purchase Price Allocation" sections will be created as well as historical financial statements and trend analysis.

To gather the necessary data, I will have to comb through the company filings, investor presentations, earnings call transcripts, industry reports and data from sources such as IDC, the proxy statement , merger agreement, 8-K filings and filings from other parties involved, annual 10-K and quarterly 10-Q filings. Assumptions will have to be made on the capital structure as well as the interest rates and principal repayment terms.

In Part 2, different scenarios need to be taken into consideration since there are various outcomes possible for Dell. Three scenarios will be showcased: base, upside, downside and the Street consensus. Revenue will be projected on a segment- by – segment basis and at least one of the scenarios will approximate the Wall Street consensus thinking.

In Part 3, I will link the mandatory repayments to the assumptions I set up in the beginning and the company's available cash flow each year. Optional repayments will be made in order of loan seniority in the capital structure and I will handle all cases in my formula, including those where revolver borrowing is required, those where no revolver borrowing is required and those where the entire debt balance is paid off early. The interest expense calculated will be based off my assumptions in the beginning and will flow directly into the Income Statement, creating a circular reference. During the calculation for the five-year IRR, I will factor in all equity invested by Silver Lake, as well as any additional equity invested over the years and capital used for acquisitions. I will create sensitivity tables based on the four different scenarios, the post-buyout acquisitions and more standard metrics such as purchase price, exit multiple and the percentage of debt.

In Part 4, I will include support for two acquisitions for year 2 and year 4. Dell is unlikely to grow its revenue organically. Therefore, it will need to acquire other companies to align to its strategy over the past few years. I will build in support for post LBO acquisitions where I can be able to adjust the purchase price and the form of payment (additional investor equity from Silver Lake vs. debt) for both deals. Simple assumptions will be made for the debts that are in line with those used in the LBO's initial capital structure. Revenue and expenses for each acquisition will be able to be adjusted and these can either stay constant or increase at a constant percentage each year. Simple assumptions will also be made for the Balance Sheet and the Cash Flow Statement and every acquired company's EBIT will be tied to its purchase price, assuming an "effective yield" and a margin. The revenue contribution will also be linked to the Operating Income and this margin. I will look into some of Dell's recent acquisitions and take into account the additional debt repayment and interest expense from the LBO, as well as changes in other major

cash outflows such as Capital Expenditure, dividends and share repurchases. My assumptions will be in line with Dell's previous acquisitions and with its financial capacity post-buyout.

In Part 5, I will calculate the Internal Rate of Return (IRR) for investors, in this case, Silver Lake partners and create sensitivity tables based on cases I will develop further on. A summary/conclusion of the deal will be presented at the end along with recommendation as to whether pursue this deal or not.

2.0 Data Mining, Capital Structure and Model Setup

For Part 1, when gathering information, I looked at Dell's internal analyst presentation to get a view of what the company is thinking in terms of their revenue growth, profitability growth and other factors to build a model that not only matched these exactly but come up with different scenarios and not just match their overly optimistic estimates.

Some important historical data I found include historical bids that various parties have been engaged in with Dell. These actual proposals were from Blackstone and Carl Icahn. Blackstone, however, later backed out after their initial bid. These bids were important as they helped me later on when I weighed in on the valuation of Dell as in this case, there were just one buyer and one seller with no additional bids.

2.1 Data Gathering

For equity research I went to TD Ameritrade through a friend because he has a brokerage account registered with them. This gave me access to many free reports on Dell. For public filings of public companies such as Dell, I went to edgar.sec.gov. However due to the complexity and abundance of unnecessary information on this website, I decided to go to Dell's company

website at www.dell.com and looked at their Investor Relations section. This was where I pulled essential data and information from their downloadable annual reports, 10-K, 10-Q, SEC filings. For the investor presentations, I went to the "Investor Events and Webcasts" where I also downloaded the earnings call transcripts.

For analyst presentations, they gave me a good insider view into how they think about the business and what they project and use these information as a benchmark to see if my optimistic case matched with the company estimates.

Moving on to bids from Blackstone group and Carl Icahn, it can be seen that some of them are paying a different amount per share, $14.25 instead of $13.65. The BlackStone proposal initially had Dell partially staying public as some shares would continue to be publicly traded on the NASDAQ. Although these information will not be used directly, they will be useful under "what-if" scenarios to possibly recommend alternatives when pitching the investment idea.

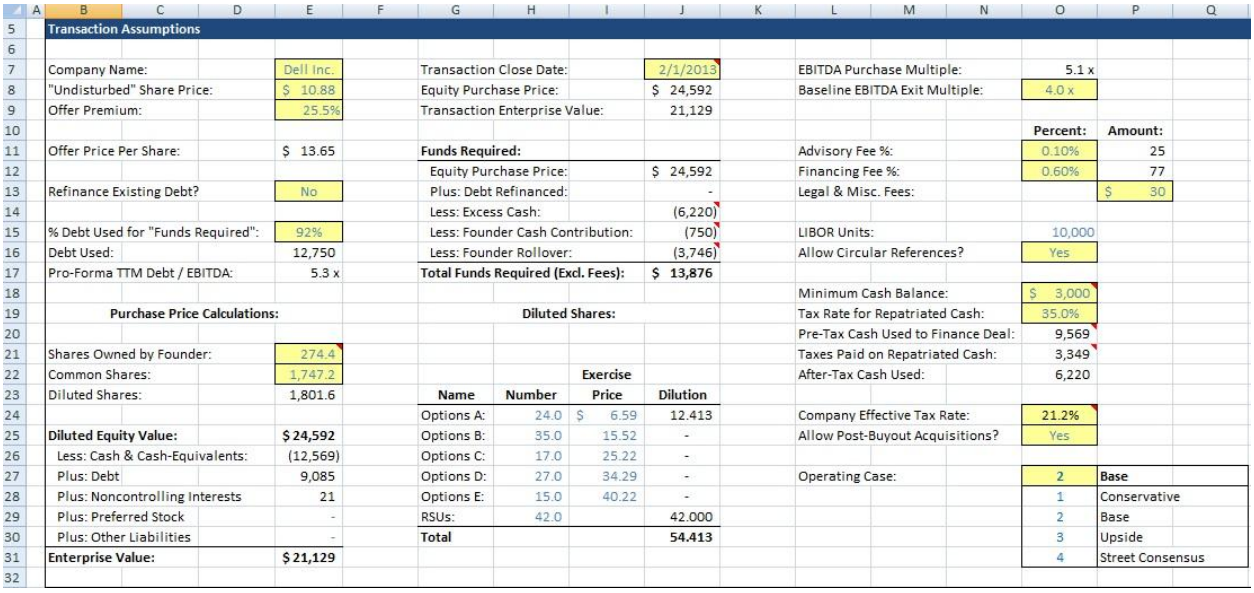
For Dell's equity research reports, I also downloaded an All Equity Research Report from "Thomson Reuters," where I came across Morgan Stanley's report where they had their own investment thesis, with their own projections, Discounted Cash Flow model and this gave me useful data about Dell's historical market share and how its market share has changed in various markets. In addition, this report helped for comparison purposes with projections and estimates that I made during my Wall Street case projections.

Another major difficulty when building this model was the debt schedule. I was able to research Dell's existing tranches of debt and have simplified that in the model. For specific merger documents, I went through the DEF14A filing, which is known as a proxy statement where I found the discussion for the background of this merger. The information regarding the plans, the

purpose, the covenants and agreements, the conditions for the merger, termination will only be useful for lawyers working on the deal or bankers who are negotiating it. For the purpose of modeling, I used the projected financial information and the financing the merger section extensively. Some information from parts of the merger agreement was useful during treatments of the company's stock options and restricted stock units. The Dell LBO Financing section was also important because it told me exactly where the source of finance, what the different tranches of debt would be and what the interest rates were, what the principal repayment terms on those would be. That was the end of my process in gathering data.

2.2 Transaction Assumptions

Moving on with Part 1, I made Transaction assumptions.



Transaction Assumptions																
Company Name:	Dell Inc.		Transaction Close Date:		2/1/2013		EBITDA Purchase Multiple:	5.1 x							
"Undisturbed" Share Price:	$ 10.88		Equity Purchase Price:		$ 24,592		Baseline EBITDA Exit Multiple:	4.0 x							
Offer Premium:	25.5%		Transaction Enterprise Value:		21,129										
													Percent:	Amount:	
Offer Price Per Share:	$ 13.65		**Funds Required:**				Advisory Fee %:						0.10%	25	
			Equity Purchase Price:		$ 24,592		Financing Fee %:						0.60%	77	
Refinance Existing Debt?	No		Plus: Debt Refinanced:		-		Legal & Misc. Fees:							$ 30	
			Less: Excess Cash:		(6,220)										
% Debt Used for "Funds Required":	92%		Less: Founder Cash Contribution:		(750)		LIBOR Units:						10,000		
Debt Used:	12,750		Less: Founder Rollover:		(3,746)		Allow Circular References?						Yes		
Pro-Forma TTM Debt / EBITDA:	5.3 x		**Total Funds Required (Excl. Fees):**		**$ 13,876**										
							Minimum Cash Balance:						$ 3,000		
Purchase Price Calculations:			**Diluted Shares:**				Tax Rate for Repatriated Cash:						35.0%		
							Pre-Tax Cash Used to Finance Deal:						9,569		
Shares Owned by Founder:	274.4						Taxes Paid on Repatriated Cash:						3,349		
Common Shares:	1,747.2				Exercise		After-Tax Cash Used:						6,220		
Diluted Shares:	1,801.6		**Name**	**Number**	**Price**	**Dilution**									
			Options A:	24.0	$ 6.59	12.413	Company Effective Tax Rate:						21.2%		
Diluted Equity Value:	**$ 24,592**		Options B:	35.0	15.52	-	Allow Post-Buyout Acquisitions?						Yes		
Less: Cash & Cash-Equivalents:	(12,569)		Options C:	17.0	25.22	-									
Plus: Debt	9,085		Options D:	27.0	34.29	-	Operating Case:						2	**Base**	
Plus: Noncontrolling Interests	21		Options E:	15.0	40.22	-							1	Conservative	
Plus: Preferred Stock	-		RSUs:	42.0		42.000							2	Base	
Plus: Other Liabilities	-		**Total**			**54.413**							3	Upside	
Enterprise Value:	**$ 21,129**												4	Street Consensus	

To figure out the "undisturbed share price", I went on Google Finance and look at Dell's share price history on here. There was a massive jump between January 11th and January 14th and so I picked the undisturbed share price of $10.88, from right before news of this potential LBO buyout broke. Normally for M&A deals, analysts look at the price one day before or sometimes

even 30 days before but in this case, I decided to go back as far as possible and to the date before news of the buyout actually broke and people started speculating on it. In this case, it was January 11th and the share price is $10.88 per share. The offer premium is calculated in percentage and backwards from the price Silver Lake offered: $13.65 per share, which equals the undisturbed share price multiply by one plus this 25.5% offer premium.

For the transaction close date, although it was really announced the beginning of February, it certainly did not close then on February 1st, 2013. In real life, a major deal like this would take at least six months to nine months and sometimes more than that to close. So if anything, it might be more accurate to assume that this deal closes toward the end of their fiscal year 2014, or sometimes between the period September to December 2013. However that will create a lot of complications. Then, I will have a stub period and while it may be interesting to look at, it is unrealistic to accomplish building the model in a short period of time. I simplified it and assumed that it closes right at the end of Dell's most recent fiscal year 2013.

Refinance existing debt is always an important issues with LBOs and even more so for Dell, because they have a fairly unusual capital structure. I built an option here to set it to "Yes" or "No". I just set it to zero or one for the only allowable values. For the next part, normally in an LBO model, there is a leverage ratio, which basically means that if I need $10 billion for this deal and for instance, I have a 50% leverage ratio then that means I get 50% in the form of debt. So that is $5.0 billion and then 50% in the form of equity from the PE, so another $5.0 billion. However, because Michael Dell has this Founder rollover, he was contributing some of his own cash from his own investment funds (technically his personal family office). Depending on how much he contributed, I might end up getting to a negative equity contribution for Silver Lake. Hypothetically, this is a $10 billion deal, and Michael Dell is rolling over $2.0 billion. If the

leverage ratio of 80% is put in this cell, that would not give me the accurate numbers. Because an 80% leverage ratio would correspond to around $8.0 billion, and that means effectively Silver Lake could contribute nothing and still get the deal done.

And if the leverage ratio is 90%, the situation would become worse because then Silver Lake would end up contributing a ($1.0) billion, which obviously does not make sense. So the better way to figure out the number is to base this on how much of a funding shortfall there actually is. I looked at the purchase price, added in any debt that is necessary to refinance, or debt being paid off, and then subtracted excess cash that the company is using, and then Michael Dell's cash contribution and how much he is rolling over.

That in turns told me, going down to the Sources and Uses schedule, how much I will have to spend from all these different sources, how much debt I would have to take on, how much equity Silver Lake is contributing. Although this is a bit of an unorthodox way, it is the only way to get the model to work.

49	**Sources & Uses - Initial Transaction**				
50					
51	**Sources:**		**Uses:**		
52	Revolver:	$ -	Equity Value of Company:	$	24,592
53	Term Loan B:	4,000	Refinance Existing Debt:		-
54	Term Loan C:	1,500	Assume Existing Debt:		9,085
55	ABL Facility:	2,000	Advisory Fees:		25
56	1st Lien Bridge Facility:	2,000	Capitalized Financing Fees:		77
57	2nd Lien Bridge Facility:	1,250	Legal & Misc. Fees:		30
58	Microsoft - Subordinated Note:	2,000	**Total Uses:**	**$**	**33,808**
59	Assume Existing Debt:	9,085			
60	Company - Excess Cash:	6,220			
61	Founder - Cash Contribution for Equity:	750			
62	MD Investors - Founder Rollover Equity:	3,746			
63	Silver Lake - Investor Equity:	1,258			
64	**Total Sources:**	**$ 33,808**			
65					

The share counts came straight from the 10-K. I went to search in the DEF14A Merger Agreement and on page 10, it was stated that:

"Michael S. Dell, Chairman and Chief Executive Officer of the Company, and The Susan Lieberman Dell Separate Property Trust (together with Mr. Dell, the "MD Investors"), who together have agreed, severally and not jointly, to transfer, contribute and deliver to Parent, immediately prior to the consummation of the merger, 273,299,383 shares of the Common Stock…".

However, in page 4, it was stated that : "As of May 16, 2013, Mr. Dell and certain of his related family trusts beneficially owned, in the aggregate, 274,434,319 shares of Common Stock…" I wanted to simplify it and go with the number 274,434,000 shares. Technically this also included a few options but I have ignored this for simplicity.

I started with the calculation of the diluted share, diluted equity value and enterprise value. Then I got into funds required.

To get the full option schedule, I looked at the Dell Fiscal Year 2013 10-K Options RSU fillings-excerpts and options outstanding.

Table of Contents

DELL INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS ((

Information about options outstanding and exercisable at February 1, 2013 is as follows:

	Options Outstanding		
Range of Exercise Prices	Number Outstanding	Weighted-Average Exercise Price per Share	Weighted-Average Remaining Contractual Life
	(in millions)		(in years)
$ 0 - $9.99	24	$ 6.59	9.6
$10.00 - $19.99	35	15.52	7.5
$20.00 - $29.99	17	25.22	2.4
$30.00 - $39.99	27	34.29	1.2
$40 and over	15	40.22	2.1
Total	118	$ 22.51	4.7

Then I scrolled down and get the restricted stock awards, in which I was able to pull out the non-vested restricted stock balance, $42 million. Restricted shares do not have strike prices. They are

just normal shares that employees and management are restricted from selling for a certain time period so I treated them as normal shares. In addition, due to the fact that the treatment to these shares were discussed in the Merger Treatment of Options, RSUs :

"Will be canceled and converted into the right to receive an amount in

cash, equal to the product of the number of shares, times the amount that Silver Lake is offering minus the actual exercise price of those options." Then I looked carefully at the RSUs and effectively it is something similar that they will be cancelled and converted into the right to receive from the surround corporations an amount in cash equal to. By taking my common shares and adding in the shares owned by the Found, I got 1.8 billion diluted shares. For the diluted equity value calculation, I looked at the Balance Sheet and pulled information straight from there for Cash and Cash equivalents. I ignored short-term investments since the number was insignificant and added any existing debt.

On Dell's actual Balance Sheet, there are many different tranches of debt. I looked at the Dell 10-K Existing Debt Excerpt and added all the different tranches of debt together and consolidated it, even with the short term debt. Listing and tracking these separately does not add anything to the model.

Non-controlling interest is something that always has to be added when calculating enterprise value. Although very small, I included into the calculation of enterprise value. Preferred stock will be zero and other liabilities that could potentially count toward enterprise value are also zero. I calculated debt and equity value first. I took the number of diluted shares times the offer price per share to get around $24 to $25 billion in diluted equity value. Enterprise value turned out to be about $21 billion because Dell has so much excess cash on its Balance Sheet.

For founder rollover, per the terms of the merger, I ignored a share valuation difference since it is small. I went to the Merger Agreement and it stated:

"Mr. Dell, stating that he would consider reducing the valuation of his rollover shares to $13.36 a s a means of preventing Silver Lake to increase its offer to $13.60." Michael Dell's investment firm's (his family office) shares would only be valued at $13.35 per share as opposed to the $13.65 being offered to the unaffiliated stockholders, in other words normal institutional investors. The question arises is should I have taken that into account. I personally do not think it is worthwhile. On a deal size of $24 billion or more, when taken into account all the funding sources, the difference of around $100 million is relatively small so I ignored it in the interest of simplicity. For the Founder rollover, I took the shares that Michael Dell currently owns and multiply that by the offer price. I had to subtract the Founder rollover to get to the total funds required because if he is rolling over shares, Silver Lake needs to buy 273 million less shares.

Because afterward Michael Dell will still own those shares and no fund needs to be transferred because the ownership of those shares is not actually changing. From page 10 of the DEF14A Agreement, Mr. Dell is to provide an additional $500 million into cash equity.

So he has this option to do it and then his own investment management firm has the ability to provide an aggregative of up to $250 million in cash equity financing for the merger. There is that option to contribute even more. In other words, other entities affiliated with and owned by Michael Dell are contributing an additional $750 million.

Ultimately, the amount that Silver Lake will pay and the amount of debt that we need are both going to be reduced by the fact that they are throwing in additional cash to purchase shares and he is rolling over around $3.7 or $3.8 billion worth of existing shares.

For EBITDA purchase multiple, I took the transaction enterprise value and divide by the trailing 12 months EBITDA, which I assumed is the 2013 fiscal year EBITDA, which equals 5.1x. I assumed a baseline exit multiple 4.0x and then ranged my sensitivities around that.

The legal and miscellaneous fees are around $300 million, which is reasonable for a very large buyout like this. Lawyers and accountants do cost a lot, especially when the deal requires parties to work with them for months or years. For advisory fees, I took them as a percentage and multiplied that by the equity purchase price. For financing fees, I took the percentage and then multiplied by the amount of debt used. The LIBOR is set to 10000 units.

The last and most interesting part is what Dell will be doing with their overseas cash. In Schedule 14A from the SEC, section LBO Financing, and they listed a couple of different categories. Silver Lake is contributing around $1.4 billion in cash and then Michael Dell is contributing $500 million plus up to $250 million additional, which is $750 million in total. Microsoft is also contributing this $2.0 billion subordinating note at a 7.25% interest rate and then up to $13.75 billion in debt financing. It is also assumed that Dell contributes $7.4 billion of cash, to actually purchase its own shares an contribute to this leverage buyout, making it a fairly unusual scenarios however that is also very commonly done with companies that have huge excess cash balances like Dell does. This is actually one of the reasons that make this deal so controversial.

Shareholders such as Southeastern Asset Management, Carl Icahn and others will look at this and say instead of taking Dell private, and then owning a substantial portion afterwards and an even more substantial portion, why not reward the actual shareholders, existing shareholders and issue a dividend or return the cash to them in some other form. The problem is that when I went

to their filings and took a look at their financial statements, most of this cash is overseas. Therefore, if Dell is going to use it for the deal, they will have to pay some type of tax rate on it, unless they could do something trickier. However, I assumed they do pay the standard tax rate on repatriated cash for the U.S., which is around 35%. I assumed their minimum cash balance is $3.0 billion and then I took their existing cash balance on their Balance Sheet and subtracted that $3.0 billion to figure out how much Dell can put toward the deal. Then I took this cash and cash equivalents of $12.5 billion and then subtracted the $3.0 billion minimum cash balance I have assumed here so I get around $9.5 – 9.6 billion. Taxes paid and then I took this number and multiply by the tax rate on this cash, and then after tax cash used. $9.5 billion minus the taxes paid so $6.2 billion net cash amount to contribute towards the deal after taking into consideration the tax effect on repatriated cash.

However, it is different because in the fillings, they are assuming $7.4 billion. They are also completely ignoring this issue of taxes on overseas cash, which is something I could not do. Later on, I discussed the accounting treatment for these taxes, which were essentially a loss. Therefore, I treated this as a loss on the Balance Sheet and reduced shareholders equity directly by this number to get the Balance Sheet to balance. It is unclear why, in the Merger Agreement, they are completely ignoring this issue, but it does need to be taken into account, as the pre-tax money cannot be used to fund a deal like this.

It has to be after-tax cash that has already been taxed in some way. For the effective tax rate, I took the average effective tax rate historically of four recent years, which is lower than statutory due to low tax regions overseas. The effective tax rate is calculated by taking the income tax provision of each year dividing by pretax income of the respective year.

For the excess cash, I ended up subtracting this, and I linked to the after tax excess cash and then this got me to the funds required. I had $13.8 billion in total funds required which is roughly the amount that Dell indicated in its fillings to be necessary to finance the deal. So for the debt used, I linked this total funds required and multiplied by the percent debt used, which got me to $12.5 – 12.6 billion. This ended up excluding the revolver, which was why there was a slight difference between this and the numbers that Dell quotes in its filings. Last part here, pro forma TTM debt to EBITDA was calculated to be 5.3x. In addition, to mimic what the actual deal was like, I set the "Refinancing Existing Debt" to "No".

2.3 Debt Assumptions

Debt Assumptions - Initial Transaction (Excludes Debt from Post-Buyout Add-On Acquisitions)								
Debt Amounts:			**Interest Rates:**			**Principal Repayment %:**		
Revolver Commitment (Undrawn):		$ 1,100	Revolver:	L + 225		Revolver:		N/A
Total Existing Debt (if assumed):		9,085	Total Existing Debt:	2.94%		Total Existing Debt:		(See debt schedules.)
	%:	**$ Amount:**						
Total Debt Raised:		$ 12,750		**Rate:**	**LIBOR Floor:**			
Term Loan B:	31%	4,000	Term Loan B:	L + 350	1.00%	Term Loan B:		1.0%
Term Loan C:	12%	1,500	Term Loan C:	L + 300	1.00%	Term Loan C:		10.0%
ABL Facility:	16%	2,000	ABL Facility:	L + 175	0.00%	ABL Facility:		0.0%
1st Lien Bridge Facility:	16%	2,000	1st Lien Bridge Facility:	L + 400	1.00%	1st Lien Bridge Facility:		0.0%
2nd Lien Bridge Facility:	10%	1,250	2nd Lien Bridge Facility:	L + 525	1.00%	2nd Lien Bridge Facility:		0.0%
Microsoft - Subordinated Note:	16%	2,000	Microsoft - Subordinated Note:	7.25%	0.00%	Microsoft - Subordinated Note:		0.0%

Moving on to the debt assumptions section, I pulled the information regarding the interest rate floor, principal repayment and other debt terms from the Merger Agreement on page 102. Silver Lake's contribution is $1.4 billion and there is $750 million additional from Michael Dell. Then we have the 7.25% subordinated debt from Microsoft. Although the rollover is not mentioned, Michael Dell is rolling around 273-274 million shares, along with the existence of 13.75 billion worth of debt and $7.4 billion worth of cash. I also took into account the repatriation tax rate. If the company needs to borrow extra, then there is usually a revolver and in this case, this revolver is actually undrawn. With subordinating notes, there normally are no principal repayments, so effectively I left the cell blank saying it is at 0.00%. There are other types of debt, and all the

banks and lenders are listed in the Merger Agreement file. $4 billion is in term loan B, $1.5 billion in term loan C, $3.25 billion in first lien and second lien bridge facilities. Then there are two items at the end, which are both effectively revolvers and/or commercial receivables facilities. For the bridge loan business, they did not exactly split out what portion goes to the first lien versus the second lien so I assumed that $2.0 billion is in the first and the $1.25 billion is in the second lien. A bridge facility is essentially that the company borrows this money temporarily, but ends up replacing it and refinancing it with some other types of debt financing after the transaction closes, which can be understood as temporary funding. The $1.1 billion belongs to the revolver and in this case, I assumed that commercial receivables facility would be undrawn. The "$1.9 billion pursuant to a term/commercial receivables facility" did not relate to funding the transactions and more of a working capital item.

For the term loan, the file told me about the interest subject to a floor of 2.0% and based on the highest of primary, the overnight federal funds rate, plus 0.5% and the one month LIBOR rate, plus 1.0% plus 2.5 %. The important thing to note is that "a LIBOR – based rate, subject to a floor of 1.0%" means that the LIBOR cannot go below 1.0%. With term loan C, I took the LIBOR – based rate subject to a floor of 1.0% plus 3.0% and the other important thing to extract is the principal repayment so for the term loan B, it was 1.0% each year. It is not exactly clear why they skipped term loan A but that is just the treatment. The ABL facility is an asset based facility , with a LIBOR rate plus 1.75% with step downs and step-ups by 0.25%. They mentioned that the for the bridge facilities, interest under the senior first lien bridge facility will equal initial LIBOR – based rates, as selected by the bar subject to 1.0% floor plus 4.0% increasing by 50 basis points every three months thereafter up to a cap. However, there is no information about what this cap is or over how long a time period this will last. Therefore, to make it simple, I

assumed the rate is LIBOR plus 4.0% with a LIBOR floor of 1.0%. Then it can be seen that any loans not repaid will be converted into senior first lien term loans maturing seven years. All the maturity dates of the debts were effectively not relevant in this case since I was only looking at it over a five-year period. Anything less than five years, like the revolver, is simply going to be refunded and redrawn and renegotiated from banks, so those need not to be factored in. Most bridge facilities are refinanced and converted into something else later on and this automatically converts into these senior first lien term loans.

2.4 Sources and Uses

Sources & Uses - Initial Transaction				
Sources:			**Uses:**	
Revolver:	$ -		Equity Value of Company:	$ 24,592
Term Loan B:	4,000		Refinance Existing Debt:	-
Term Loan C:	1,500		Assume Existing Debt:	9,085
ABL Facility:	2,000		Advisory Fees:	25
1st Lien Bridge Facility:	2,000		Capitalized Financing Fees:	77
2nd Lien Bridge Facility:	1,250		Legal & Misc. Fees:	30
Microsoft - Subordinated Note:	2,000		**Total Uses:**	**$ 33,808**
Assume Existing Debt:	9,085			
Company - Excess Cash:	6,220			
Founder - Cash Contribution for Equity:	750			
MD Investors - Founder Rollover Equity:	3,746			
Silver Lake - Investor Equity:	1,258			
Total Sources:	**$ 33,808**			

The main difference between this LBO deal and typical M&A deals is the fact that a company is contributing its own cash. Founder, Michael dell, contributes his own cash and rolls over some of his own equity, and Silver Lake contributes some of its own. This is the PE standard "sponsor equity contribution", or in other words, what they are not paying for with debt. What they are doing is instead, taking their own cash raised from limited partners (i.e. LPs) and using it for the deal. The excess cash and then the rollover and additional cash contribution are going to be under the Sources column, because they fund the deal. Under the Uses column, the main issue is

paying the company itself all the outstanding shares, except for the ones that are being rolled over and then refinancing any debt. “Assuming Existing Debt” is both a Source and a Use and finally for the fees, these would count as Uses: the M&A advisory fees, the capitalized financing fees and finally legal and miscellaneous fees. All of these are paid upfront in cash but the difference is that the capitalized financial fees will become a balance sheet line time and then amortized over time. The other two will be reflected right away effectively coming out of Shareholder’s Equity on the transaction adjustments on the pro-forma Balance Sheet, and then cash on the other side on the Balance Sheet.

For Sources, the revolver is undrawn initially so I assumed it would be $0. The other debt, term loan B/C, the ABL facility and the bridge facilities and the subordinate note were linked from the “Debt Assumptions” section. For the “Assume Existing Debt” line item, there are two options: either to refinance it or assume it. If this cell were set to no, then I would assume it. If it were set to yes, then I would have zero because the only option left would be to refinance. So the cell formula = IF (debt finance…). If the names cell variable were set to one, then I would set this to zero, otherwise I would set it to the company’s existing debt balance, which was the total existing debt on the Balance Sheet. For the company’s excess cash, this is the after-tax cash number that Dell is contributing from the repatriated cash. When they bring this cash back to the U.S., they will be taxed on it and I have already reflected it in the section, with the 35% tax rate for repatriated cash. By using the standard method which got both columns to match, Silver Lake Investor Equity was calculated as a plug by adding up all the uses to arrive at Total Uses and subtracting all the other Sources. So whatever was needed to spend to acquire Dell that has not already been funded with cash or with a rollover or with the debt was what Silver Lake would

have to contribute here.

Ownership Percentages, Pre and Post-Deal and Post-Add-On Acquisitions								
Pre-Deal Ownership Percentages:			**Post-Deal Ownership Percentages:**			**Ownership Percentages At Exit:**		
Michael Dell:		15.2%	Michael Dell:		78.1%	Michael Dell:		59.9%
Silver Lake Partners:		0.0%	Silver Lake Partners:		21.9%	Silver Lake Partners:		40.1%
Institutional Investors:		84.8%	Institutional Investors:		0.0%	Institutional Investors:		0.0%
Total:		**100.0%**	**Total:**		**100.0%**	**Total:**		**100.0%**

The final thing is to look at the ownership percentages. Prior to the merger, Michael Dell owned around 15% or 16% of the company. This number probably came from the fact that they included some extra shares for various reasons so their number would end up higher than mine. Post transaction, MD and then MSD Capital (i.e. his family office), in other words, those are both Michael Dell and he ends up owning around 75-76%. Silver Lake will own the remaining 24$. For accuracy testing with my numbers, I took Michael Del' shares, the Founder shares, divided it by the diluted shares. Silver Lake owns 0.0% prior to the deal and then the institutional investors own essentially one minus everything else so this added up to 100% pre-deal.

Post-deal, Michael Dell's ownership is no longer limited to those 274 million shares. It is equal to the cash contribution for equity, plus his rollover divided by the cash contribution, plus his rollover, plus Silver Lake's contribution. In other words, I took his own equity contributions, then dividing by all equity contributions which consisted of his plus Silver Lake's. Therefore, his ownership jumped from 15% to 75%, almost 76%, which really annoyed existing shareholders. He has the potential to make a lot more profit if the company does well if the turnaround works out and existing shareholders do not get the opportunity to participate in any of this potential upside. So that is part of the reason why they were so annoyed about it and the whole reason why it is possible is because of this excess cash balance. This amount of cash is so substantial and since the company has so much excess cash, they simply do not need as much in the form of debt or in the form of Silver Lake's own equity. As a result, Michael Dell can get away with rolling

over what he owns and putting in some extra and owning by far the majority of the company. Institutional investors will own nothing assuming that the deal gets done and Silver Lake will own the rest, which is around 24-25%.

This is a very interesting deal in which with most leverage buyouts, usually institutional investors will own 80-90% of the company and then afterwards the private equity firm will own 80-90% of the company. Here by contrast, it is something completely different. Silver Lake, a PE company owns a minority of the company, under 30% and Michael Dell owns around three quarters of the company.

2.5 Purchase Price Allocation

Goodwill Creation & Purchase Price Allocation - Initial Transaction			
Goodwill Calculation:		**Fixed Asset Write-Up:**	
Equity Purchase Price:	$ 24,592	PP&E Write-Up %:	10.0%
Less: Seller Book Value:	(10,680)	PP&E Write-Up Amount:	213
Plus: Write-Off of Existing Goodwill:	9,304	Depreciation Period (Years):	8
Total Allocable Purchase Premium:	**$ 23,216**		
		Intangible Asset Write-Up:	
Less: Write-Up of PP&E:	$ (213)	Purchase Price to Allocate:	23,216
Less: Write-Up of Intangibles:	(4,643)	% Allocated to Intangibles:	20.0%
Less: Write-Down of DTL:	-	Intangibles Write-Up Amount:	4,643
Plus: New Deferred Tax Liability:	1,028	Amortization Period (Years):	5
Total Goodwill Created:	**$ 19,389**		
		New Deferred Tax Liability:	$ 1,028
Capitalized Financing Fees:	77		
Financing Fees Amortization Period:	5		

I am paying $24-$25 billion for the company but going down to their Balance Sheet, if their shareholder equities have only $10-$11 billion, and I have a giant gap in our Balance Sheet. Because I wiped out this shareholder equity as part of our pro-forma Balance Sheet transaction adjustments, I ended up replacing it with $25 billion worth of debt, of equity, of changes in cash, etc. Therefore, I had a change of $10-$11 billion versus a change of $25 billion and it was obvious to see that the Balance Sheet was going to simply go out of balance. I plugged that gap

by creating goodwill, which reflected the premium over Dell's book value that Silver Lake has paid for and then I would make some other adjustments. I might adjust the values of other assets and I was going to end up creating intangible assets as well. For the seller's book value, an important notice is that under new accounting rules and standards, shareholder equity is actually split out different from other items, such as preferred stock and non-controlling interests and in this specific case, founder equity , what Michael Dell owns and then sponsor common equity, which is what Silver Lake owns. In an LBO scenario like this, I did not want to write down the entire equity section but just the shareholders equity.

I was also going to write off the existing goodwill. It is essential to reset the goodwill on Dell's Balance Sheet. I had a $23 billion premium to allocation. Another question that comes up was how much would this $23 billion go to goodwill versus other items like the write ups and the write downs. For PP&E write up, it was somewhat of an arbitrary process to figure out the number. The approach I took was to go to Dell's historical acquisitions over the most recent fiscal years. From the Acquisition Information of their Filing Excerpts, they gave me the total amount Dell was allocating to amortizable and tangible assets and then the total amount for goodwill, but no information was given on the write up or purchase price. However, by looking at the number, intangible assets are around $2.1 billion. The total cost they paid is around $5.0 billion which means that about 40% of this went to intangible assets. I assumed that 40% of this purchase price, this purchase premium went to intangibles and I could calculate everything based on that and assumed something lower for the PP&E write up, approximately 10%. This is the standard assumption as it just reflects that usually the market value of real estate, of buildings generally increases over time. However, on the Balance Sheet, it is recording that historical cost, minus accumulated depreciation.

The problem with the 40% for intangibles was that this number corresponds to the total price in their fillings. The proper way to think about this problem is to look at the total price that Silver Lake is paying, so the $24 billion pertained to this price and then actually applied the 40% to that number. However, I would end up with an unreasonably high number so I knocked it down to 20% instead. In real life for similar LBO deals, when the deal is about to close, there will be accountants at Big Four firms or other people who work at valuing these types of intangible and tangible assets, they will come in and make some type of estimates.

For the period of PP&E and intangible assets, the standard assumption is to use eight years for the PP&E period and for the amortization period for intangibles, I can use five years.

When I looked at their previous acquisitions, the weighted average useful life was around 6.1 years so my assumption of five years seemed to be reasonably accurate. The other thing to keep in mind is that Dell, as a company, is much different from some of these smaller software companies that they acquired. Dell is probably going to have far less in intangible assets than a peer software or services company would have, because Dell has more manufacturing capabilities, more hard assets. That is another reason why I reduced this 40% to 20% instead.

For the purchase price to allocate, I linked this to the purchase premium. For the intangible write up amount, I multiplied this 20% times the purchase price to allocate and this would be amortized over five years. For the PP&E, I took the 10%, multiply by the existing PP&E balance, net PP&E. This would be amortized over eight years.

I then moved on to the calculation of the goodwill. The write up of PP&E was subtracted because this was going to cause the asset side to increase. Due to this increase, I would need less goodwill to plug the gap. I subtracted the write up of intangibles as well. The write down of the

deferred tax liabilities was left blank as this item did not exist pre-transaction. There was this one line item, the long term deferred tax liability that actually got created in this transaction so I put in a zero for the write down of DTL in the interest of simplicity. For the new DTL, it was equal to the write up amounts (PP&E and intangibles) times their tax rate. I added this amount to the liability side, increasing the amount of goodwill required to plug the gap, which made the Balance Sheet balance.

Now I took our allocable purchase premium, added up everything and got to $19 billion of goodwill. For the financing fees, these also get capitalized and amortized over time and for the financing fee period, and I assumed it would be five years based on the average life span, the average tenure of all these different debt tranches. That ends the Part 1 of the LBO case study.

3.0 Creating different Revenue and Expense scenarios

3.1 Servers & Networking, Desktops and Laptops

Income Statement - Segment-Level Revenue Scenarios										
		Historical				Projected				
FY Ending February 1,		2010	2011	2012	2013	2014	2015	2016	2017	2018
Revenue by Product:										
Servers and Networking:		$ 6,032	$ 7,609	$ 8,336	$ 9,294	$ 9,517	$ 9,993	$ 10,193	$ 10,589	$ 10,694
Storage:		2,192	2,295	1,943	1,699					
Services:		5,622	7,673	8,322	8,396					
Software & Peripherals:		9,499	10,261	10,222	9,257					
Mobility:		16,610	18,971	19,104	15,303	13,909	14,048	13,334	13,401	12,612
Desktop PCs:		12,947	14,685	14,144	12,991	12,801	12,865	12,329	12,267	11,675
Total Revenue:		**52,902**	**61,494**	**62,071**	**56,940**					
Selected Case:	Base									
Total Market Size by Product Segment:										
Servers and Networking:		$ 49,851	$ 52,840	$ 55,573	$ 54,351	$ 55,981	$ 57,101	$ 58,243	$ 58,825	$ 59,414
Mobility:		136,920	162,145	160,538	151,515	154,545	156,091	156,871	157,655	157,655
Desktop PCs:		98,198	107,582	104,770	105,618	106,674	107,207	107,207	106,671	106,138

Growth in Total Market Size by Product Segment:										
Servers and Networking:			6.0%	5.2%	(2.2%)	3.0%	2.0%	2.0%	1.0%	1.0%
Mobility:			18.4%	(1.0%)	(5.6%)	2.0%	1.0%	0.5%	0.5%	0.0%
Desktop PCs:			9.6%	(2.6%)	0.8%	1.0%	0.5%	0.0%	(0.5%)	(0.5%)
Market Share by Product:								**Base Case:**		
Servers and Networking:		12.1%	14.4%	15.0%	17.1%	**17.0%**	**17.5%**	**17.5%**	**18.0%**	**18.0%**
Market Share Cases - Servers and Networking:										
Conservative Case:						16.0%	15.0%	15.0%	14.0%	14.0%
Base Case:						17.0%	17.5%	17.5%	18.0%	18.0%
Upside Case:						17.5%	18.0%	18.0%	18.5%	18.5%
Street Consensus Case:						16.0%	15.5%	15.5%	15.0%	15.0%
Selected Case:	**Base**					**17.0%**	**17.5%**	**17.5%**	**18.0%**	**18.0%**
Market Share by Product:								**Base Case:**		
Mobility:		12.1%	11.7%	11.9%	10.1%	**9.0%**	**9.0%**	**8.5%**	**8.5%**	**8.0%**
Market Share Cases - Mobility:										
Conservative Case:						7.5%	7.0%	6.5%	6.0%	5.0%
Base Case:						9.0%	9.0%	8.5%	8.5%	8.0%
Upside Case:						10.0%	10.0%	10.5%	10.5%	10.5%
Street Consensus Case:						8.5%	8.0%	7.0%	6.0%	5.0%
Selected Case:	**Base**					**9.0%**	**9.0%**	**8.5%**	**8.5%**	**8.0%**
Market Share by Product:								**Base Case:**		
Desktop PCs:		13.2%	13.7%	13.5%	12.3%	**12.0%**	**12.0%**	**11.5%**	**11.5%**	**11.0%**
Market Share Cases - Desktop PCs:										
Conservative Case:						10.5%	10.0%	9.5%	8.5%	7.5%
Base Case:						12.0%	12.0%	11.5%	11.5%	11.0%
Upside Case:						12.5%	12.5%	13.0%	13.0%	13.5%
Street Consensus Case:						11.5%	11.0%	10.0%	9.0%	8.0%
Selected Case:	**Base**					**12.0%**	**12.0%**	**11.5%**	**11.5%**	**11.0%**
								Base Case:		
Services Revenue:		$ 5,622	$ 7,673	$ 8,322	$ 8,396					

Services Segment Metrics:					
Deferred Revenue from Warranties:	$ 5,900	$ 6,416	$ 7,002	$ 7,103	
Contracted Services Backlog:	6,900	7,500	8,400	$ 8,700	
Total Services Backlog:	**12,800**	**13,916**	**15,402**	**$ 15,803**	
Services Revenue % Prior Year Backlog:		*59.9%*	*59.8%*	*54.5%*	
					Base Case:
Growth Rate in Services Backlog:		8.7%	10.7%	2.6%	
Growth Rate Cases - Services Backlog:					
Conservative Case:					
Base Case:					
Upside Case:					
Street Consensus Case:					
Selected Case: **Base**					
					Base Case:
Software & Peripherals Revenue:	$ 9,499	$ 10,261	$ 10,222	$ 9,257	
Growth Rate:		*8.0%*	*(0.4%)*	*(9.4%)*	

Growth Rate Cases - Software & Peripherals:										
Conservative Case:										
Base Case:										
Upside Case:										
Street Consensus Case:										
Selected Case: **Base**										
Storage Revenue:	$ 2,192	$ 2,295	$ 1,943	$ 1,699						
Growth Rate:		*4.7%*	*(15.3%)*	*(12.6%)*						
Other Revenue and Expense Metrics and Key Performance Indicators										
		Historical				**41671**				
FY Ending February 1,	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Revenue by Business Unit:										
Global Large Enterprise:		$ 18,111	$ 18,786	$ 17,781						
Global Public:		16,377	16,070	14,828						
Global Small And Medium Business:		12,608	13,547	13,413						
Global Consumer:		14,398	13,668	10,918						
Total Revenue:	52,902	**61,494**	**62,071**	**56,940**						

I jumped into Dell's revenue and expenses and looked at the different segments of their business, as well as other scenarios that I would set up to allow me to look at what the business be like over the next four to five years, under different assumptions. Dell has six main segments and I will address the first three of them now: Severs & Networking, Desktops and Laptops.

The questions outlined are as following:

1. Where do I find the data (review of documents)?
2. Project on customer basis or product/service basis?
3. Unit sales and ASPs or market share and market growth rates?
4. How to size the market using historical data, IDC, and Dell's filings?
5. How to project the market size of each segment in future years
6. Market share cases for Servers & Networking
7. Market share cases for Mobility (Laptops)
8. Market share cases for Desktop PCs
9. Putting it all together to calculate revenue

I also looked at how my numbers compare to the consensus estimates, to what Wall Street analysts were thinking and also to what the company was thinking, and to some of the more downside and pessimistic case type scenarios.

I looked into the Dell – FY 2013 Q4 Financials as it gave me some extremely useful data such as a market share for desktop PC's and portable PC's or laptops, going back to 2003 all the way up through 2012. This told me exactly how its market share has changed over time. The Dell Consensus Estimates Excel file gave me the Wall Street consensus estimates at the time the deal was announced for Dell's revenue, over the next year and the year beyond that as well, which I notice that it stayed relatively flat.

From the Dell FY 2012 Analyst Day Presentation, although it did not disclose operating income by business segment in an useful way, it did tell me that less than 50% comes from enterprise and over 50% comes from end user computing and Dell wanted to shift this in the future. This

data point proved very useful to me as I completed this analysis. Equity research reports have very useful data, one of which is from Jefferies, which has some information about the total shipments in all these different markets. The one from Credit Suisse, although was older compared to the time the deal was announces, gave me an estimate of margins by segment, which proved to be useful in the future.

Moving on, I looked at the Dell internal financial projections and this was part of the Merger Agreement. Dell actually hired the Boston Consulting group, one of the top three consulting firms in the world, to come in and create all these different cases about Dell's revenue estimates. However, it did not end up being that useful because it was too high level. They only gave us revenue, gross margin and operating income. The operating income was non- GAAP, which means I did not know what they were adding back in terms of amortization and other charges. There were some indications however, unless I saw the specific numbers, I could not be sure of it.

The final document, called the Dell Case Study Channel Check, is a collection of comments when people working on the buy side and private equity, at hedge funds and asset management firms go out in the field and speak with key distributors, suppliers, retailers, customers and sometimes via contacts with connections on LinkedIn.

The next decision I needed to make was do I project this on a customer basis or a product and service basis. In this case, it was most useful to project it on a product basis. Based on the filings, it was grouped by business unit, which effectively meant the type of customer they have. They not only gave us the revenue but also the market share and the operating income by different business units so there was no calculations needed. However, if I did not set the model

up like this, and if I did not follow these specific business units, enterprises, SMB, public and consumer, I was never going to be able to figure out the operating income by each of the six business segments mentioned earlier. Therefore, I would have to come up with a much higher level view of expenses, but on the revenue side, it made the most sense to do so. One of the reasons why I prefer to do this was because each of these different segments has a very different story around it. The big story is that laptops and desktop sales around this time are falling off dramatically because tablets are taking over. This was proven by the shipment data collected from the equity research reports. There has been a big falloff overall in notebooks, netbooks, desktops going from $344 million in 2010 to only $330 million. Meanwhile tablet shipments have gone up from zero to 125 million in only the span of few years. The bottom line is that each of these segments will tell a very different story.

With servers and networking, they are growing quite a bit because they made some good acquisitions and there is a huge demand for servers, mainly because of the move to cloud computing. Service is going up because Dell is emphasizing this increasingly and selling more and more bundled service deals. Software and peripherals happen to be staying in the same spot.

But it is very important to look how each of them is moving in different direction. The main trend really is that consumer spending is falling and this is driven by the shift to tablets. Therefore, when making rough estimates for expenses later on, I projected them on the basis of unit sales and average selling price (ASP) or market share and market growth rates. For the mobility, on other words laptop and desktop segments, Dell gave me directly all the market shared data publicly. Desktop went from 17% -18% to 12% and laptops went from 16-18% to 10-12% so the trend was definitely one of falling market share. Furthermore, I wanted to make sure in my projections that this trend continues in future years. The question was how to figure

out the total market size. I took Dell's market share or take their revenue from mobility and then divide by the market share for that segment and that would back me into the total market size for the segment. On how to project the market size of each segment in future years, I started with the market size and then my cases were going to revolve around Dell's market share. I could assume a constant market share then assume that the market itself grew at higher or lower rates. To get the view of how these markets were going to change over time, I perused the Channel Checks document again and went to the section that had Comments and Overall Market Size and Growth. Accordingly, the growth for desktops and laptops is modest and Windows 8 just came out around this time but spending is probably going to be flat after that until the next major release. Then based on the comments, some companies are planning to increase spending aggressively servers because big data is becoming more important. Cloud computing, where everything is store on these servers and then accessed remotely by employees and customers is becoming very important and it is a huge trend. For mobility, I assumed slight higher growth in the coming years as because with laptops in many cases, they are often creating hybrid tablet laptop-type computers so I assumed a slight increase here and then a slightly lower number for desktop growth.

The bottom line is servers and networking is growing by a modest amount. The other segments are either staying flat or increasing a little bit.

For steps number six, seven and eight as detailed in the outline, I went through the market share cases for the three main segments of Dell. For servers and networking, the trend is increasing market share growth over time. I went to the Channel Checks document to look at the servers and networking segment. The overall key takeaway is that Dell may not have much pricing power, but companies like them because of their integrated solutions and add on service.

Based on a quote from the research, an IT manager from a Fortune 500 Company said that he would not be surprised by the 20% market share and even smaller companies are expecting to buy more servers because they are moving more and more of their data and other processing functions in-house. These results show that I was going to be a little more optimistic with my projections, however, not hitting that 20% level because it is still a substantial increase. Assumptions for growth rate were then made for upside, downside and the Street consensus case.

For Mobility and Desktop PCs, I looked back to the Channel Checks. It is very difficult to do a traditional retail check because these are sold directed at customers. Therefore, it is not possible to go to a large retailer and necessarily ask about this, because so many of their sales come in from direct channels. The Wall Street consensus estimate is that their market share is going to decline by at least a few percentages points over five years. In addition, the common trend is that consumers are not expected to increase or decrease their spending by very much. This indicates that the base case should probably be in the same range as it was historically and maybe even declining a little bit because one common issue that has been cited above is the lack of pricing power on the part of Dell. Assumptions for growth rate were then made for the conservative, upside and the Street consensus case.

3.2 Revenue Model Part 2: Storage, Services , and Software & Peripherals

On balance, these are all less significant than the first three that we looked at, for servers and networking, laptops and desktops. The reason is simply in that they are smaller in terms of size and unlike the servers and networking segment, which is growing at a fairly good rate compared to everything else here and unlike the mobility and desktop segments which are falling at a good clip, these are not going to be changing quite as much. There will be some growth overall in the

services segments, because it is an area that Dell has certainly been emphasizing over the past few years and historically over the past three or four years, it has grown by a good amount. However, on some of the others like Storage, I would end up not having enough information to make solid judgments on. For software and peripherals, because of the way Dell lists their revenue and breaks out things, it was be once again somewhat difficult to come to a solid view on this. I made the following detailed outline for this revenue model:

1. Logic behind Services revenue
2. How to project the backlog and % recognized each year
3. Software & Peripherals projections
4. Storage revenue projections
5. Adding up total revenue

I will discuss the logic behind how I projected the services revenue because it is more than just a simple percentage growth rate and I will be looking at other factors as well. Once I go through the logic, I will mention how to actually project it by going into some details behind the revenue recognition for deferred revenue and their IT services backlog. Then I will look at the software and peripherals projections and then the storage revenue projections. Both of these are effectively going to be simple percentage growth rates as storage revenue is such a small percentage of the total that it does not even matter what assumptions I pick for it. As mentioned before, I want to ground my projections especially the Street consensus case.

For the projections, I pulled in the numbers for the services revenue from the filings along with a couple of other metrics such as deferred revenue from warranties and then contracted services backlog. From the Dell 2013 Fiscal Year 10-K Services Backlog document, it is said that:

"Estimated services backlog represents signed contracts that are initially $2.0 million or more in total expected revenue with initial contract term of at least 18 months." Essentially these were the sum total of contracts that are all worth over a certain amount, $2.0 million in this case.

It was not exactly clear what the correlation was between something like this, the backlog and then the services revenue that got recognized. However, there had to be some correlation. The way this works is very simple in that a company will sign up customers for services like this and often as is the case with Dell, they will be recognized over many years. So a portion of this will get recognized as revenue. Now they may pay for these upfront in cash or it may be a combination of both where they pay a portion upfront and then a portion over time in cash. But regardless of the treatment, the point is that they amass a certain amount in signed contracts and then they recognize those over time, as they actually deliver the service according to the rules of revenue recognition from accounting. For the deferred revenue from warranties, I searched for the numbers in the 10-K filings. With this one, the idea is that whenever Dell sells some of its product: laptops, desktops, servers, etc., the customers will have the option to purchase a warranty with it. The warranty covers accidental damage, it covers the computer breaking over a certain time period and then customers get reimbursed for it. Just as with any other type of services revenue, even if the customer pays for it all in cash up-front, the company cannot recognize it as revenue because they have not actually delivered the service that the warranty guarantees. Therefore, this has to be recognized over time as well.

The bottom line is that I assumed here was that the services revenue was going to be closely related to both of these and that effectively was just going to be a percentage of the prior year's total backlog. I was going to take a look at how much deferred revenue from warranties, what

their backlog was in the prior year and then I assumed that going forward, it was going to be very closely linked to that number.

For more research, I went to their earning calls for the 2013- Q4. On page 3, the CFO presented: "The services backlog and deferred services revenue increased 3.0% to $16.3 billion." This number was roughly in the same range with the $15.8 billion I had in my excel spreadsheet. More interestingly, they said right after: "New services signings increased 9.0% to $2.1 billion on a trailing 12-month basis". With something like services revenue, I had whatever got recognized from the prior year and then I had the new signings in this year. I would take my services revenue, which was $8.3 – 8.4 billion and recognize a portion of this number as services revenue this year and add to this backlog with the total number of signings in this year. Some of these might actually be recognized as revenue. I added this number to my backlog and then I reduce my backlog by however much that got recognized as revenue. Then I reflected that as revenue ultimately on the income statement. That is the logic behind it.

I finished explaining step 1, which was the logic behind the services revenue. For the actual projections and where to come up with these numbers, I could simple take the historical average of the last three fiscal years. It is decreasing overall but from the numbers, it is far from clear that it is a definite trend in one direction or the other. For a judgment like that, I would need more like five to ten years' worth of data. Therefore, I took the average and carried this across. For the services backlog growth, I turned to the Channel Checks. The services segment has been one of the faster growing segments and a lot of people in the Channel Checks document talked about Dell's expansion overseas and how a lot of the overseas vendors in territories outside the U.S. are simply not as good or not as well known for providing these types of services. People also mentioned that Dell is really good at selling these warranties and valuated services presumably,

if they are talking about the enterprise clients that Dell has here. Again, after reading through some of the analysts' presentations and transcripts from those presentations, I noticed when they talked about how expanding services will be one of their top priorities. In the analyst's day presentation, some of Dell's goals between 2012 and 2016, whether or not these are reasonable is up for debate but Dell is aiming to grow at an average annual growth rate of 6.0%. Meanwhile, as their core business has either declined or stagnated, it must be a very important priority. On the basis of all these events, I can guess that the growth rates should be solid because it is one of the company's priorities and is something everyone in the Channel Checks has highlighted, as something Dell is focused on and something they plan to spend additional funding on.

Assumptions for growth rate were then made for the four cases: the base, upside, downside and the Street consensus case.

3.3 Expenses Scenarios:

In this part, I looked to create different scenarios for cost of goods sold (COGS), and operating expenses (OpEx). The company does not break it out in a way that shows after COGS and after OpEx, how much pre-tax profit and before interest expense they are actually generating. Due to the lack of detailed information after looking into the breakdown of segment-by-segment in the 10-K, I looked at COGS as a percent of revenue and OpEx as a percent of revenue and assumed that the margins of the company will increase in more optimistic scenarios as they move into more of a software and services business. On the other hand, if they stay more in the hardware realm, their margins are going to continue to decrease because they will lose pricing power. They will still be able to sell their products but their margins will simply be lower. Because of

the mark-up, the difference between how much they are paying for products to manufacture then, to get the parts and supplies and then sell them, will decrease over time. I started out with COGS and took a look at the historical percentages and at the Channel Checks document. Most people seem to think that prices will keep falling on the hardware side. The current markup percentages that Dell has will be difficult to maintain which supported what I just mentioned before. Then with the software and services, yet the margins were higher. The problem is that a lot of this revenue for Dell is coming from companies they have acquired, that are still in growth mode so their margins inevitably are going to be lower. I looked at these numbers as a percent of revenue and did not look specifically at the margins.

Assumptions were then continued to be made for the basic four cases.

3.4 Income Statement Projections and Footing my numbers

In this part, I calculated everything down to net income and EBITDA at the bottom of the Income Statement and finally at the end, I compared my numbers to analyst estimates to some of Dell's own internal financial projections as well as some figures from the Boston Consulting Group that were created as part of a process where Dell hired the group to advise them on this deal and look at potential scenarios. One notice during my calculation was the when I have taken the average of the previous four fiscal years of Dell for the tax rate, Dell's effective tax rate is lower than their statutory rate of 35% or 40%. The reason is that a lot of their operating subsidiaries are overseas. Furthermore, many of these regions have lower tax rates or they are taking advantage of some legal loopholes and tricks to effectively pay lower taxes. In any case, I went with the effective tax rate because that is what Dell is really expected to pay over future years. Calculations for EBITDA were then made for the forward years. Assumptions for the

four basic cases are shown in the excel spreadsheet. When I went into the Internal Financial Projections document from Dell, the numbers from the Boston Consulting Group with 25% of expected cost savings and in another case 75% basically meant Dell hired them to come in and recommend areas to cut costs. Based on the results, my projections seemed more optimistic than BCG's but it did not seem like I was wildly off the mark with what third party sources like BCG were saying about the deal. Looking at the equity research report conducted by Morgan Stanley, the general trajectory of their numbers generally matched up to what I had.

3.5 Balance Sheet Projections

I will explain the logic behind assumptions for Balance Sheet drivers and then I will look at the historical trends and come up with numbers in the future based on those trends and what I know about Dell's business model, as well as the comments from customers and suppliers in the course of the Channel Checks. For the actual projection of the Balance Sheet, I started with current assets then moved to long term assets, then current liabilities and then finally long term liabilities and equity at the end. I made the accounts receivable a percent of revenue. Essentially accounts receivable represents the cash payments from customers that Dell is waiting on. Dell has already delivered the service or product to them and I assumed that they are going to pay Dell, because Dell has sent the invoice but still waiting for the actual cash payment. Accounts receivable will always follow sales because generally speaking, unless the company has changed its policies or its business model, it is usually going to stay in a slightly tight range and will increase as sales increase. For the provision for doubtful accounts, this essentially represents the amount that the company is not likely to receive of these cash payments that it is waiting one. It represents a contra-asset and is netted against the gross AR to get the get AR, which is what most companies show on their Balance Sheet. Because as a company gets bigger, as the business grows, it is

going to be sending out more invoices and perhaps not receiving them back in cash, so the provision for those so-called doubtful accounts is going to increase over time. Another item that was a little more specific to Dell is the short term financing receivables, which is one of the line items on the Balance Sheet. This is because Dell offers customers the option to pay in installments and other sorts of offers where customers can pay in credit and then actually pay in cash later on. All of these were going to be linked to sales. For inventory and COGS, these would be very closely liked as this is typical for hardware or manufacturing companies. Because as the company amasses inventory, it only records it as COGS, once that inventory is turned into finished products and actually sold. Prepaid expenses are generally linked to operation expenses and not as closely linked to COGS. With short term and long term deferred revenue, they are always going to follow sales to some extent. Finally, depreciation/amortization was calculated as a percent of revenue. It would be better to have a full PP&E schedule but I made this assumption as I had four different cases and I wanted to ensure it stays in roughly the same range. Amortization of existing tangibles came from the company's own schedule and their filings. From then, I estimated the number in future years based on historical trend and most of these are filled up by using the average. After that, I projected and linked the Balance Sheet numbers, starting with current assets and going all the way down.

3.6 Cash Flow Statement Projections

I started by projecting the cash flow from operations at the top then moved into cash flow from investing and then cash flow from financing and some of the changes in debt. I left out the debt schedules because I will address this part in the later section. The top line Net Income flowed in from the Income Statement. Depreciation of existing PP&E would be pulled from the PP&E schedule later on. Amortization of existing intangibles would be coming from Dell's own filings.

The FX rate effect is difficult to predict therefore, I took the simple average. The deferred income taxes were calculated as a percentage of book taxes or taken from the Book vs. Cash Tax schedule. All the items that belong in the Changes from Operating and Assets and Liabilities flowed in directly from the Balance Sheet. Items from Cash flow from Investing are unpredictable, therefore I took the simple historical average and zero-ed out maturities/purchases of short-term investments as well as acquisition of businesses, as those two are just there for robustness. Items from cash flow from Financing are also zero-ed out because they were purely there for robust model. When doing the Balance Sheet adjustments, I reduced Cash and Cash equivalent as they were used to finance the deal. The net PP&E was increased due to the write up and I wrote down existing goodwill and added in new Goodwill. The adjusted intangible assets reflected the intangibles write-up and new capitalized financing fees were added before computing the long-term assets. For term loan B in the long-term liability section, I added new debt balances from LBO. For shareholder's equity in the equity portion, I wiped out the old figures, subtracted legal/advisory fees and reflected taxes paid on repatriated cash.

4.0 Completing Debt Schedules

4.1 Mandatory Debt Schedules

For setting up the debt schedules, I calculated the Sources of Funds and Revolver Borrowing, the Mandatory Debt Repayment, the logic behind the debt repayment formulas and calculations for Total Mandatory Repayments.

Cash & Cash-Equivalents and All Investments:					
Net Interest Income / (Expense):					
Sources of Funds:					
Beginning Cash Balance:	3,000	7,219	11,340	16,090	20,854
Less: Minimum Cash Balance:	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)
Plus: Cash Flow Available for Debt Repayment:	4,186	4,088	4,717	4,731	4,969
Subtotal Before Revolver:	**4,186**	**8,307**	**13,057**	**17,821**	**22,823**
Revolver Borrowing Required:	-	-	-	-	-
Total Sources of Funds:	**4,186**	**8,307**	**13,057**	**17,821**	**22,823**
Payment Schedule for Existing Debt:	1,617	1,465	790	400	-
Uses of Funds:					
Mandatory Debt Repayment:					
Total Existing Debt:	1,617	1,465	790	400	-
Term Loan B:	39	39	39	39	39
Term Loan C:	148	148	148	148	148
ABL Facility:	-	-	-	-	-
1st Lien Bridge Facility:	-	-	-	-	-
2nd Lien Bridge Facility:	-	-	-	-	-
Microsoft - Subordinated Note:	-	-	-	-	-
Mandatory Repayment Total:	**1,804**	**1,652**	**977**	**587**	**187**

One thing to notice is for the revolver borrowing, how it works is that if I have mandatory debt repayments that I cannot meet with my subtotal before revolver (i.e. mandatory debt repayments exceed subtotal before revolver), in other words however much in cash plus cash flow I have available to use to repay debt with. In that case, I would have to borrow something on the revolver and it is like how credit card repayments often work for individuals. If I have bills coming in and I cannot actually meet them with my monthly income after expenses, I may need to borrow something in the short term and take out some debt on my credit card to pay for it. That is the same thing with companies and how revolvers are really used for. If they cannot meet their mandatory debt obligations, they may need to borrow something extra temporarily and then pay it back when they have additional cash flow.

Moving on to step two on how to do the mandatory debt repayment, I started with the total existing debt and used a MIN formula. I am saying that Dell is going to either repay the minimum amount or if the total amount of existing debt is less than this, then I will just pay off that total remaining amount of debt. The data could be pulled out either from page 83 of the 10-

K or from the Filing Excerpts and the estimated mandatory repayments would be laid out there. For the MIN formula which is = MIN (Prior Year Debt, Beginning Balance * Yearly Amortization), a simple explanation is : If the Prior Year Debt = 400, Beginning Balance = 500 and Yearly Amortization = 10% , then repay 50 since 50 < 400. If Prior Year Debt = 20, Beginning Balance = 500, Yearly Amortization = 10%. Repayment is 20 since 20<50.

4.2 Optional Debt Schedules

Optional Debt Repayment:										
Revolver:						-	-	-	-	-
Total Existing Debt:						2,382	6,655	8,295	8,685	9,085
Term Loan B:						-	-	3,784	3,900	3,900
Term Loan C:						-	-	-	1,330	1,330
ABL Facility:						-	-	-	-	-
1st Lien Bridge Facility:						-	-	-	-	-
2nd Lien Bridge Facility:						-	-	-	-	-
Microsoft - Subordinated Note:						-	-	-	-	-
Optional Repayment Total:						**2,382**	**6,655**	**12,079**	**13,915**	**14,315**

The same MIN formula applied to these optional debt schedules, to check the balance so far versus what I started with in the annual repayments. This time around, I had to put in a few additional checks to handle cases where I borrowed and draw on the revolver. In addition, I had to factor in however much I have actually spent so far on the mandatory repayments. To calculate the total optional repayment total, I used the MAX/MIN formula = MAX (MIN (Prior Year Revolver , Cash Flow Available – Debt Repaid So Far), 0)

The basic formula here is I am taking the MIN between the prior year revolver and then the cash flow available to repay it minus the debt that I have repaid so far, then minus whatever cash flow I have actually used to repay debt both on mandatory and optional repayments so far. Then around it is the MAX and zero part. To understand how this works, I will basically illustrate three cases. For case number one, I will assume the revolver is $100 in the prior year. My cash flow available is $100 and I have repaid, so far $50 worth of debt. I repay $50 because $100

minus $50 equals $50, which is less than $100. In this case, I am really just working with that MIN formula on the inside. And prior year revolver is $100 cash flow available minus debt repaid so far is $50. $50 is less than $100 and so I, therefore, pay what I can on that revolver balance.

Case number two, I will say the revolver is $20 and my cash flow available is $100. I have repaid $50 so far. In this case, I do not want to repay $50 because I would end up with a negative revolver. Instead, I repay $20, which is less than $50 so once again, I am just working with that MIN formula on the inside. The first two cases are straightforward and match what I went through with the mandatory repayments.

For the last case, let's say my revolver is $100. My cash flow available is $100, but I have repaid $120 of debt so far. What this means is that I have had to borrow something on my revolver. I have had to borrow $20 extra on my revolver to simply make these debt repayments of $120 so far. In this case, I would repay $0, which is less than negative ($20). The prior year revolver is $100. Cash flow available minus debt repaid so far, that becomes ($20), because $100 minus $120 is negative ($20) so I have the minimum between zero and negative ($20). In that case, the minimum is ($20) since it is less than $0. However, we have the MAX zero formula on the outside, making it $0. To simply put it, if the inside is negative that means I have borrowed something on the revolver and therefore I am not going to repay anything optionally, because I simply cannot do so. I have no extra cash flow. I could not even meet my minimum mandatory repayment requirements without drawing on my revolver so therefore, I cannot repay anything optionally and this is going to default to zero.

To finish this part, I entered the formulas for Term Loan B and C and the rest effectively are all zero. Then I calculated the total and the cash generated and the uses of the fund.

Up next, I linked everything together on the cash flow statement and recalculated the interest expense and filling that of the balance and that takes me to the end of my debt schedules coverage.

5.0 Building in support for Post-LBO Add-on Acquisitions

I will factor in post LBO acquisitions in this buyout model and this case study specifically.

Dell is unlikely to grow revenue significantly on their own, which is true from the model I have. It is growing up by almost nothing over the five years. Therefore, I will incorporate two acquisitions, one in Year 2 and one in Year 4. Creating full schedules would be very time consuming and tedious because these are going to be relatively small acquisitions.

I would need to be able to adjust the purchase price and the form of the payment, either in the form of additional investor equity from Silver Lake or debt from both deals. I made simple assumptions for debt and made them in line with the LBO's original capital structure. I assumed a slight premium on the interest rates because I would have a lot more debt on Dell's Balance Sheet after the LBO. I factored in the revenue and expenses and assumed fairly simple percentage growth rate. For expenses, I assumed constant margins as well as simple assumptions are made for Balance Sheets and Cash Flow Statement combinations. I also looked at what kind of revenue and EBIT or operating income multiples Dell has paid for companies in the past and assumed something similar going forward. It is quite subjective but the main thing is I made sure my assumptions had to be in line with their previous acquisitions.

Ownership percentage is where I had the first significant change. I had ownership percentages at exit. Because as a result of putting in additional equity, Silver Lake's ownership of the company changed by the end of the transaction. When they go and sell the company, their ownership

percentage will be different. To find out information on previous acquisitions, I looked into two good sources. Source number one, I went back to one of Dell's analyst presentations, on page 17 of their 2012 presentation, a lot of information was found on some of their previous acquisitions, everything from IRR to the total cash used to fund M&A transaction from 2008 to 2012 and total number of companies acquired. The fact that they are saying $10.3 billion was used to acquire companies from these four-five years tells me that if I have acquisition spending in the range of $2.0 billion per year, that amount would be reasonable as it is around the historical average over the past four or five years. Now in my case, I assumed only two companies got acquired for simplicity. I wanted to pay the most attention to the total amount of spending over the period and the post-acquisition revenue. This number is harder to incorporate directly because companies grow over time. From the information, it could be inferred that I am getting about $1.0 billion in revenue for each $1.0 billion spent on M&A deals, or maybe a little less than that number. For the second source, I went to the Filings Excerpts and looked under the acquisition information, where they have information about their acquisition of Quest, SonicWALL, Wise Technologies and the most useful part is where they give a mini purchase-price allocation schedule. It gave me the estimated cost that has been allocated to intangibles, to in-process R&D, to cash to AR, goodwill, deferred revenue and the total amount they have spent, which is around $5.0 billion. On the second page of the acquisition section, I found the pro-forma net sales and net income, which basically means, if these acquisitions had happened at the start of 2013 and closed around then, the numbers for the company's revenue and net income would have been as what is shown. Interestingly, revenue would have been higher than I might expect but net income would have actually been lower, which means these companies Dell acquired actually resulted in negative

net income. This is not surprising as the acquired companies were in their early stages and their growth modes were probably not as profitable as Dell.

From then, I made estimations for PPA and assets/liabilities, revenues and EBIT contributions from previous acquisitions. I assumed that Dell would spend $1.5 billion to acquire the first company Year 2 and $2.0 billion for its second acquisition in Year 4.

The completed excel screenshots for assumptions and calculations are presented as below:

Post-Buyout Acquisition Assumptions

Acquisition 1 (Year 2) Assumptions	Percent:	Amount:
Purchase Price:		$ 1,500
% Cash Used (Equity from Silver Lake):	50%	750
% Debt Used:	50%	750
Goodwill % Purchase Price:	70%	$ 1,050
Intangibles % Purchase Price:	40%	600
Cash % Purchase Price:	10%	150
Accounts Receivable % Purchase Price:	5%	75
Long-Term DR % Purchase Price:	(10%)	(150)
Other LT Liabilities % Purchase Price:	(15%)	(225)
Acquisition 1 Debt:		
Interest Rate:	L + 600	
LIBOR Floor:	1.00%	
Principal Repayment %:	5.0%	38
Revenue and Operating Income Contributions:		
Operating Income Yield on Purchase Price	4.0%	60
Operating Margin:	14.0%	
Revenue Contribution:		429
Revenue Growth Rate:	10.0%	

Acquisition 2 (Year 4) Assumptions	Percent:	Amount:
Purchase Price:		$ 2,000
% Cash Used (Equity from Silver Lake):	50%	1,000
% Debt Used:	50%	1,000
Goodwill % Purchase Price:	70%	$ 1,400
Intangibles % Purchase Price:	40%	800
Cash % Purchase Price:	10%	200
Accounts Receivable % Purchase Price:	5%	100
Long-Term DR % Purchase Price:	(10%)	(200)
Other LT Liabilities % Purchase Price:	(15%)	(300)
Acquisition 2 Debt:		
Interest Rate:	L + 650	
LIBOR Floor:	1.00%	
Principal Repayment %:	5.0%	50
Revenue and Operating Income Contributions:		
Operating Income Yield on Purchase Price	4.0%	80
Operating Margin:	14.0%	
Revenue Contribution:		571
Revenue Growth Rate:	10.0%	

Most Recent Fiscal Year Acquisition Information:	Amount:	% Price:	Useful Life:
Total Amount Spent on All Acquisitions:	$ 5,039		
% Cash Used:	100.0%		
Goodwill Created:	3,487	69.2%	
Intangible Assets Created:	2,170	43.1%	6
Cash & Cash-Equivalents:	407	8.1%	
Accounts Receivable:	176	3.5%	
Long-Term Deferred Revenue:	(417)	(8.3%)	
Other Long-Term Liabilities:	(784)	(15.6%)	

	Amount:	Multiple:	Margin:
Full-Year Forward Revenue Contribution:	$ 1,508	3.1 x	
Full-Year Forward Net Income Contribution	(168)		(11.1%)
Approximate Annual Amortization:	362		
Pre-Tax Income Before Amort. & Merger Fee	194		12.8%
Pre-Tax Income Yield on Purchase Price:			3.8%
Approximate Forward EV / EBIT Multiple:		23.9 x	

Balance Sheet

	Historical				Transaction Adjustments			Projected		Year 2 Acquisition			Projected		Year 4 Acquisition			Projected
FY Ending February 1,	2010	2011	2012	2013	Debit	Credit	2013	2014	2015	Debit	Credit	2015	2016	2017	Debit	Credit	2017	2018
Assets:																		
Current Assets:																		
Cash & Cash-Equivalents:	$ 10,635	$ 13,913	$ 13,852	$ 12,569	$ -	$ 9,569	$ 3,000	$ 3,033	$ 3,033	$ 150	$ -	$ 3,183	$ 3,033	$ 3,899	$ 200	$ -	$ 4,099	$ 7,972
Short-Term Investments:	373	452	966	208	-	-	208	208	208	-	-	208	208	208	-	-	208	208
Accounts Receivable:	5,837	6,493	6,476	6,629	-	-	6,629	6,199	6,366	75	-	6,441	6,382	6,512	100	-	6,612	6,519
Short-Term Financing Receivables:	2,706	3,643	3,327	3,213	-	-	3,213	3,129	3,213	-	-	3,213	3,221	3,287	-	-	3,287	3,291
Allowances for Losses / Doubtful Account	-	-	-	-	-	-	-	(321)	(651)	-	-	(651)	(982)	(1,320)	-	-	(1,320)	(1,658)
Inventories, Net:	1,051	1,301	1,404	1,382	-	-	1,382	1,223	1,251	-	-	1,251	1,240	1,260	-	-	1,260	1,243
Prepaid Expenses & Other:	3,643	3,219	3,423	3,967	-	-	3,967	4,018	4,001	-	-	4,001	4,140	4,108	-	-	4,108	4,299
Total Current Assets:	**24,245**	**29,021**	**29,448**	**27,968**			**18,399**	**17,489**	**17,421**			**17,646**	**17,242**	**17,954**			**18,254**	**21,874**
Long-Term Assets:																		
Net PP&E:	2,181	1,953	2,124	2,126	213	-	2,339	2,374	2,412	-	-	2,412	2,450	2,490	-	-	2,490	2,531
Long-Term Investments:	781	704	3,404	2,565	-	-	2,565	2,897	3,230	-	-	3,230	3,562	3,894	-	-	3,894	4,226
Long-Term Financing Receivable, Net:	332	799	1,372	1,349	-	-	1,349	1,328	1,307	-	-	1,307	1,286	1,265	-	-	1,265	1,244
Other Non-Current Assets:	6,113	6,122	490	854	-	-	854	812	770	-	-	770	728	686	-	-	686	644
Goodwill:	-	-	5,838	9,304	19,389	9,304	19,389	19,389	19,389	1,050	-	20,439	20,439	20,439	1,400	-	21,839	21,839
Intangible Assets:	-	-	1,857	3,374	4,643	-	8,017	6,319	4,708	600	-	5,308	3,646	2,083	800	-	2,883	1,304
Capitalized Financing Fees:	-	-	-	-	77	-	77	61	46	-	-	46	31	15	-	-	15	-
Total Long-Term Assets:	**9,407**	**9,578**	**15,085**	**19,572**			**34,589**	**33,179**	**31,861**			**33,511**	**32,141**	**30,872**			**33,072**	**31,788**
Total Assets:	**$ 33,652**	**$ 38,599**	**$ 44,533**	**$ 47,540**			**$ 52,988**	**$ 50,668**	**$ 49,282**			**$ 51,157**	**$ 49,384**	**$ 48,825**			**$ 51,325**	**$ 53,662**

Liabilities & Equity:																			
Current Liabilities:																			
Revolver:	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Accounts Payable:	11,373	11,293	11,656	11,579	-	-	11,579	10,963	11,215	-	-	11,215	11,118	11,294	-	-	11,294	11,145	
Accrued Expenses & Other:	3,884	4,181	3,934	3,644	-	-	3,644	3,748	3,639	-	-	3,639	3,668	3,544	-	-	3,544	3,609	
Short-Term Deferred Revenue:	3,040	3,158	3,544	4,373	-	-	4,373	4,543	4,665	-	-	4,665	5,261	5,369	-	-	5,369	5,971	
Total Current Liabilities:	**18,297**	**18,632**	**19,134**	**19,596**			**19,596**	**19,253**	**19,519**			**19,519**	**20,047**	**20,206**			**20,206**	**20,725**	
Long-Term Liabilities:																			
Total Existing Debt:	4,080	5,997	9,254	9,085	-	-	9,085	5,688	2,269	-	-	2,269	-	-	-	-	-	-	
Long-Term Deferred Revenue:	3,029	3,518	3,836	3,971	-	-	3,971	4,259	4,373	-	150	4,523	4,677	5,070	-	200	5,270	5,374	
Other Long-Term Liabilities:	2,605	2,686	3,392	4,187	-	-	4,187	4,187	4,187	-	225	4,412	4,412	4,412	-	300	4,712	4,712	
Term Loan B:	-	-	-	-	-	4,000	4,000	3,960	3,920	-	-	3,920	1,928	0	-	-	0	0	
Term Loan C:	-	-	-	-	-	1,500	1,500	1,350	1,200	-	-	1,200	1,050	-	-	-	-	-	
Acquisition 1 Debt:	-	-	-	-	-	-	-	-	-	-	750	750	713	-	-	-	-	-	
Acquisition 2 Debt:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,000	1,000	-	
ABL Facility:	-	-	-	-	-	2,000	2,000	2,000	2,000	-	-	2,000	2,000	2,000	-	-	2,000	2,000	
1st Lien Bridge Facility:	-	-	-	-	-	2,000	2,000	2,000	2,000	-	-	2,000	2,000	2,000	-	-	2,000	2,000	
2nd Lien Bridge Facility:	-	-	-	-	-	1,250	1,250	1,250	1,250	-	-	1,250	1,250	1,250	-	-	1,250	1,250	
Microsoft - Subordinated Note:	-	-	-	-	-	2,000	2,000	2,000	2,000	-	-	2,000	2,000	2,000	-	-	2,000	2,000	
Long-Term Deferred Tax Liability:	-	-	-	-	-	1,028	1,028	1,015	996	-	-	996	974	944	-	-	944	912	
Total Long-Term Liabilities:	**9,714**	**12,201**	**16,482**	**17,243**			**31,021**	**27,709**	**24,195**			**25,320**	**21,002**	**17,676**			**19,176**	**18,249**	
Total Liabilities:	**$ 28,011**	**$ 30,833**	**$ 35,616**	**$ 36,839**			**$ 50,617**	**$ 46,962**	**$ 43,714**			**$ 44,839**	**$ 41,050**	**$ 37,883**			**$ 39,383**	**$ 38,974**	
Equity:																			
Shareholders' Equity:	5,641	7,766	8,917	10,680	14,084	-	(3,404)	(2,069)	(207)	-	-	(207)	1,809	4,418	-	-	4,418	7,163	
Noncontrolling Interests:	-	-	-	21	-	-	21	21	21	-	-	21	21	21	-	-	21	21	
Founder Equity:	-	-	-	-	-	4,496	4,496	4,496	4,496	-	-	4,496	4,496	4,496	-	-	4,496	4,496	
Sponsor Common Equity:	-	-	-	-	-	1,258	1,258	1,258	1,258	-	750	2,008	2,008	2,008	-	1,000	3,008	3,008	
Total Equity:	**$ 5,641**	**$ 7,766**	**$ 8,917**	**$ 10,701**			**$ 2,371**	**$ 3,706**	**$ 5,568**			**$ 6,318**	**$ 8,334**	**$ 10,943**			**$ 11,943**	**$ 14,688**	
Total Liabilities & Equity:	**$ 33,652**	**$ 38,599**	**$ 44,533**	**$ 47,540**			**$ 52,988**	**$ 50,668**	**$ 49,282**			**$ 51,157**	**$ 49,384**	**$ 48,825**			**$ 51,325**	**$ 53,662**	

6.0 Calculating Returns

For the final part of the financial model, I calculated the returns to the Silver Lake partners and created three main sensitivities tables with analysis of key variables in this acquisition.

Investor Returns						
FY Ending February 1,	**2013**	2014	2015	2016	2017	2018
EBITDA:	$ 4,156					$ 5,464
EBITDA Multiple:	5.1 x					4.0 x
Enterprise Value:	21,129					21,858
Equity Value:	24,592					22,580
Investor Equity:	(1,258)	-	(750)	-	(1,000)	9,050
IRR:	**35.8%**					

Sensitivity Analysis - 5-Year IRR to Silver Lake and Purchase Premium vs. Exit Multiple

Purchase Premium / Per-Share Price			Exit Multiple:								
			2.0 x	2.5 x	3.0 x	3.5 x	4.0 x	4.5 x	5.0 x	5.5 x	6.0 x
$ 15.78	45.0%		(0.3%)	7.9%	14.3%	19.7%	**24.3%**	28.4%	32.1%	35.4%	38.5%
$ 15.23	40.0%		3.4%	11.0%	17.1%	22.3%	**26.8%**	30.8%	34.4%	37.7%	40.7%
$ 14.69	35.0%		6.9%	14.1%	19.9%	24.9%	**29.3%**	33.2%	36.8%	40.0%	43.0%
$ 14.14	30.0%		10.3%	17.1%	22.7%	27.6%	**31.9%**	35.7%	39.2%	42.4%	45.3%
$ 13.60	25.0%		**13.7%**	**20.1%**	**25.6%**	**30.3%**	**34.5%**	**38.3%**	**41.7%**	**44.9%**	**47.8%**
$ 13.06	20.0%		17.0%	23.2%	28.5%	33.1%	**37.2%**	40.9%	44.3%	47.4%	50.3%
$ 12.51	15.0%		20.4%	26.3%	31.5%	36.0%	**40.0%**	43.7%	47.1%	50.2%	53.0%
$ 11.97	10.0%		23.8%	29.6%	34.6%	39.0%	**43.0%**	46.6%	49.9%	53.0%	55.9%
$ 11.42	5.0%		27.3%	32.9%	37.8%	42.1%	**46.1%**	49.7%	53.0%	56.0%	58.9%
$ 10.88	0.0%		30.9%	36.3%	41.1%	45.4%	**49.3%**	52.9%	56.2%	59.2%	62.1%

Sensitivity Analysis - 5-Year IRR to Silver Lake and % Debt Used vs. Exit Multiple

% Debt Used in Acquisition Funds			Exit Multiple:								
			2.0 x	2.5 x	3.0 x	3.5 x	4.0 x	4.5 x	5.0 x	5.5 x	6.0 x
	$ 13,876	100.0%	23.6%	35.6%	45.6%	54.0%	**61.5%**	68.1%	74.1%	79.5%	84.6%
	$ 13,530	97.5%	18.5%	27.6%	35.1%	41.5%	**47.1%**	52.1%	56.6%	60.8%	64.6%
	$ 13,183	95.0%	15.9%	23.7%	30.2%	35.7%	**40.6%**	45.0%	48.9%	52.6%	55.9%
	$ 12,836	92.5%	14.3%	21.3%	27.1%	32.2%	**36.6%**	40.6%	44.2%	47.6%	50.6%
	$ 12,489	90.0%	**13.2%**	**19.6%**	**24.9%**	**29.6%**	**33.8%**	**37.5%**	**40.9%**	**44.0%**	**46.9%**
	$ 12,142	87.5%	12.3%	18.2%	23.3%	27.7%	**31.6%**	35.1%	38.4%	41.3%	44.1%
	$ 11,795	85.0%	11.6%	17.2%	22.0%	26.2%	**29.9%**	33.2%	36.3%	39.2%	41.8%
	$ 11,448	82.5%	11.0%	16.3%	20.9%	24.9%	**28.4%**	31.7%	34.6%	37.4%	39.9%
	$ 11,101	80.0%	10.6%	15.6%	19.9%	23.8%	**27.2%**	30.3%	33.2%	35.8%	38.3%
	$ 10,754	77.5%	10.2%	15.0%	19.1%	22.8%	**26.1%**	29.2%	31.9%	34.5%	36.9%

Sensitivity Analysis - 5-Year IRR to Silver Lake and Size of Acquisition 1 vs. Acquisition 1 Yield (Acquisition 2 is 33% Bigger)

Purchase Price for Acquisition 1 (50% Debt and 50% Equity Payment)		Operating Income Yield on Acquisition 1 and 2 Purchase Prices:								
		(4.0%)	(2.0%)	0.0%	2.0%	4.0%	6.0%	8.0%	10.0%	12.0%
$	4,500	14.7%	17.7%	20.6%	23.2%	**25.7%**	28.1%	30.3%	32.5%	34.5%
$	4,000	18.3%	20.8%	23.2%	25.5%	**27.6%**	29.7%	31.6%	33.4%	35.2%
$	3,500	21.7%	23.7%	25.7%	27.6%	**29.4%**	31.1%	32.8%	34.3%	35.9%
$	3,000	24.7%	26.4%	28.0%	29.5%	**31.0%**	32.4%	33.8%	35.1%	36.4%
$	2,500	**27.5%**	**28.8%**	**30.0%**	**31.2%**	**32.4%**	**33.5%**	**34.6%**	**35.7%**	**36.8%**
$	2,000	29.8%	30.8%	31.7%	32.6%	**33.5%**	34.4%	35.2%	36.1%	36.9%
$	1,500	31.7%	32.3%	33.0%	33.6%	**34.3%**	34.9%	35.5%	36.1%	36.7%
$	1,000	32.8%	33.3%	33.7%	34.0%	**34.4%**	34.8%	35.2%	35.6%	36.0%
$	500	33.0%	33.2%	33.4%	33.6%	**33.7%**	33.9%	34.1%	34.3%	34.5%
$	-	31.7%	31.7%	31.7%	31.7%	**31.7%**	31.7%	31.7%	31.7%	31.7%

Based on the sensitivity analysis charts, I came to the conclusion that the deal looks good in Base Case but resembles a disaster in Conservative and Street consensus cases. Even with substantial decline in market sizes, numbers could work but were extremely sensitive to changes in margins and 1-2% difference in Operating Income could result in 15-20% IRR difference. Furthermore, there is very little insight into Operating Income or margins by segment. More leverage would definitely help but not much in most cases. Acquisitions are almost a non-factor because they slightly reduce IR due to low yields and additional equity required.

7.0 Summary/Conclusion of the Deal

7.1 Executive Summary:

My recommendation goes against the decision of Silver Lake acquiring Dell in a Leverage Buyout (LBO) transaction due to the lack of insight into Dell's margin and a significantly low

"margin of safety". Even if Dell's market shares falls or its key markets decline by close to 50% over the next five years, I could still realize a 15-20% IRR but only in the case that its operating margins remain stable and/or increase. There is little evidence that supports the conclusion above and substantial pricing pressure implies the strong possibility of falling margins in several segments. In a true "worst case" scenario with Dell's market share and margins declining, it is almost impossible to even realize a positive IRR. Despite Dell's acquisitive streak in the past, its acquisitions have historically had low yields to substantially make a difference to its bottom line to the IRR in this transaction.

7.2 Market Overview:

Other Revenue and Expense Metrics and Key Performance Indicators				
	Historical			
FY Ending February 1,	2010	2011	2012	2013
Revenue by Business Unit:				
Global Large Enterprise:		$ 18,111	$ 18,786	$ 17,781
Global Public:		16,377	16,070	14,828
Global Small And Medium Business:		12,608	13,547	13,413
Global Consumer:		14,398	13,668	10,918
Total Revenue:	52,902	**61,494**	**62,071**	**56,940**
Market Share of Business Units:				
Global Large Enterprise:	8.9%	8.6%	8.7%	7.0%
Global Public:	12.0%	12.8%	13.0%	12.0%
Global Small And Medium Business:	20.9%	17.7%	16.9%	15.0%
Global Consumer:	31.8%	29.3%	26.5%	24.0%
Other Data - Global Desktop, Notebook, and Tablet Shipments (Millions):				
Enterprise Desktops:	84.4	89.9	87.6	89.3
Enterprise Notebooks:	68.3	80.8	86.2	86.0
Consumer Desktops:	47.1	49.9	48.2	42.7
Consumer Notebooks:	69.0	89.1	98.8	95.3
Consumer Netbooks:	32.7	34.4	24.4	17.1
Total, Branded PCs:	**301.5**	**344.1**	**345.2**	**330.4**
Non-Branded PCs:	20.8	27.5	43.2	60.2
Total Shipments:	**322.3**	**371.6**	**388.4**	**390.6**

Dell's market share has declined across most of its customer segments as desktop and laptop shipments have stagnated or increase modestly over the past 4 years.

In my finding, the "base case" scenario assumes relatively flat total market sizes and a drop of 1-2% in Dell's shares over the next five years. The Channel checks document has information that clearly indicates the substantial pricing pressure in both these markets.

However, Dell's Servers and Networking and Services segment have experience great growth:

Income Statement - Segment-Level Revenue Scenarios				
	Historical			
FY Ending February 1,	2010	2011	2012	2013
Total Market Size by Product Segment:				
Servers and Networking:	$ 49,851	$ 52,840	$ 55,573	$ 54,351
Mobility:	136,920	162,145	160,538	151,515
Desktop PCs:	98,198	107,582	104,770	105,618
Market Share by Product:				
Servers and Networking:	12.1%	14.4%	15.0%	17.1%
Services Revenue:	$ 5,622	$ 7,673	$ 8,322	$ 8,396
Services Segment Metrics:				
Deferred Revenue from Warranties:	$ 5,900	$ 6,416	$ 7,002	$ 7,103
Contracted Services Backlog:	6,900	7,500	8,400	$ 8,700
Total Services Backlog:	**12,800**	**13,916**	**15,402**	**$ 15,803**
Services Revenue % Prior Year Backlog:		*59.9%*	*59.8%*	*54.5%*
Growth Rate in Services Backlog:		8.7%	10.7%	2.6%

Indications from the Channel checks show that Dell is very strong in both of these markets and its market share in the Servers and Networking segment will continue to increase in the next five years.

7.3 Dell's Competition:

Dell's desktop and laptop segments have the most competition. Channel checks have indicated

that Dell's products are regarded only as commodities and have little competitive advantage. HP, IBM, Oracle, SAP pose substantial threat to Dell's services and software business however IT manager customers mostly agree that it is easier to differentiate and bundle solutions in that segment to sell products. It is also unclear of Dell's performance as an end-to-end IT solution provider vs. IBM and IP. Historically, Dell has sold only through a direct sales force and its experience is limited in the fields of cooperation with value-added resellers (VARs). Another thing unclear is whether the cloud-based solutions or virtual solutions run on company-owned hardware will dominate in the future. In the case that cloud-based solutions win, Dell's strategy will not work out well in its favor. There is also massive growth in the tablets world with Apple, Google, Samsung continuously improving and releasing new products. Dell however, is a very late mover in this.

7.4 Growth Opportunities:

It is unreasonable to expect much growth in the laptop or desktop segments at best and perhaps 0% to 1-2% growth even in optimistic scenarios. The best growth opportunities for Dell lies in its Servers and Networking segment with potential increase in market share. The upwards trend in its Services revenue through more bundle sales and expansion overseas is also a positive sign for Dell's growth. Its indirect sales growth for Software/ IT solutions and its large value acquisitions such as the Quest and Perot forebodes potential growth for Dell in the years to come. Dell's tablet growth potential, although is still behind its competitor, is very noticeable:

Other Revenue and Expense Metrics and Key Performance Indicators				
	Historical			
FY Ending February 1,	2010	2011	2012	2013
Tablet Shipments:	0.0	18.0	70.0	125.0

The question arises: How will Dell be able to differentiate itself from competitors such as Apple, Google and Samsung?

7.5 Other Factors:

Michael Dell's rollover and ownership percentage, going from 15% to 75%, brings up serious questions about his true motivations. He also missed key trends upon retirement in 2004, prevented acquisitions for several years, and upon his return to the company, took Dell into the "end-to-end solutions provider" game at a very late stage of the company. The unclear future of what Microsoft's role will be as a result of its $2 billion subordinated note investment in the deal could be significant boost to Dell's hardware or inconsequential. Going private would not make a huge difference for Dell, and might actually impede its goals since it will have more difficulty in accessing capital and doing large acquisitions. Although, Dell will no longer be accountable to institutional shareholders, Silver Lake partners are unlikely to contribute significant equity given their impact on IRR. HP and IBM transformed as public companies and the question is why does Dell need to be private to do this?

7.6 Operating Scenarios:

Base Case Revenue Margins:

Income Statement - Segment-Level Revenue Scenarios										
		Historical				Projected				
FY Ending February 1,		2010	2011	2012	2013	2014	2015	2016	2017	2018
Revenue by Product:										
Servers and Networking:		$ 6,032	$ 7,609	$ 8,336	$ 9,294	$ 9,517	$ 9,993	$ 10,193	$ 10,589	$ 10,694
Storage:		2,192	2,295	1,943	1,699	1,750	1,802	1,839	1,875	1,913
Services:		5,622	7,673	8,322	8,396	9,179	9,592	10,024	10,425	10,842
Software & Peripherals:		9,499	10,261	10,222	9,257	9,627	10,012	10,313	10,622	10,888
Mobility:		16,610	18,971	19,104	15,303	13,909	14,048	13,334	13,401	12,612
Desktop PCs:		12,947	14,685	14,144	12,991	12,801	12,865	12,329	12,267	11,675
Total Revenue:		**52,902**	**61,494**	**62,071**	**56,940**	**56,783**	**58,313**	**58,031**	**59,179**	**58,625**
Selected Case:	Base									

Income Statement						
		Projected				
FY Ending February 1,		2014	2015	2016	2017	2018
Total Revenue:		**56,783**	**58,313**	**58,031**	**59,179**	**58,625**
Net Income:		**2,328**	**2,758**	**2,882**	**3,312**	**3,420**
EBITDA:		**$ 4,297**	**$ 4,770**	**$ 4,856**	**$ 5,315**	**$ 5,301**
EBITDA Margin %:		*7.6%*	*8.2%*	*8.4%*	*9.0%*	*9.0%*

The operating scenarios are most likely to be somewhere in between the Street consensus case and the Base Case.

CONSERVATIVE CASE:

Income Statement						
		Projected				
FY Ending February 1,		2014	2015	2016	2017	2018
Total Revenue:		**$ 52,120**	**$ 51,055**	**$ 50,376**	**$ 48,396**	**$ 46,129**
Net Income:		**1,849**	**1,610**	**1,191**	**954**	**545**
EBITDA:		**$ 3,642**	**$ 3,240**	**$ 2,634**	**$ 2,214**	**$ 1,528**
EBITDA Margin %:		*7.0%*	*6.3%*	*5.2%*	*4.6%*	*3.3%*

THE STREET CONSENSUS CASE:

Income Statement						
		Projected				
FY Ending February 1,		2014	2015	2016	2017	2018
Total Revenue:		**$ 54,825**	**$ 54,161**	**$ 52,324**	**$ 49,959**	**$ 47,852**
Net Income:		**2,031**	**1,921**	**1,732**	**1,654**	**1,509**
EBITDA:		**$ 3,901**	**$ 3,667**	**$ 3,340**	**$ 3,118**	**$ 2,768**
EBITDA Margin %:		*7.1%*	*6.8%*	*6.4%*	*6.2%*	*5.8%*

BASE CASE:

Income Statement					
	Projected				
FY Ending February 1,	2014	2015	2016	2017	2018
Total Revenue:	**$ 56,783**	**$ 58,313**	**$ 58,031**	**$ 59,179**	**$ 58,625**
Net Income:	**2,328**	**2,758**	**2,882**	**3,312**	**3,420**
EBITDA:	**$ 4,297**	**$ 4,770**	**$ 4,856**	**$ 5,315**	**$ 5,301**
EBITDA Margin %:	*7.6%*	*8.2%*	*8.4%*	*9.0%*	*9.0%*

UPSIDE CASE:

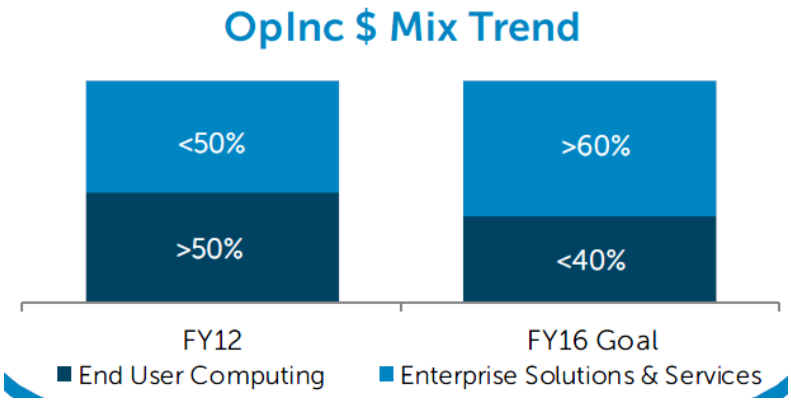
Income Statement					
	Projected				
FY Ending February 1,	2014	2015	2016	2017	2018
Total Revenue:	**$ 59,374**	**$ 61,320**	**$ 64,271**	**$ 66,061**	**$ 67,980**
Net Income:	**2,668**	**3,190**	**3,648**	**3,906**	**4,180**
EBITDA:	**$ 4,754**	**$ 5,349**	**$ 5,890**	**$ 6,137**	**$ 6,360**
EBITDA Margin %:	*8.0%*	*8.7%*	*9.2%*	*9.3%*	*9.4%*

7.7 Unpredictability of the Margins:

Dell breaks out Operating Income by customer segments and not by products segment (at least, not officially or not in the past year):

Other Revenue and Expense Metrics and Key Performance Indicators				
	Historical			
FY Ending February 1,	2010	2011	2012	2013
Operating Income by Business Unit:				
Global Large Enterprise:		1,490	1,889	1,553
Global Public:		1,446	1,584	1,238
Global Small And Medium Business:		1,383	1,581	1,505
Global Consumer:		180	433	(11)
Total Operating Income (Excl. Overhead):	3,327	**4,499**	**5,487**	**4,285**
Operating Margin (Excl. Overhead):	*6.3%*	*7.3%*	*8.8%*	*7.5%*

No information is released on Gross Margin, Operating Margin for Servers & Networking, Laptops and Desktops segment. Also, no information is disclosed on margins by product:



7.8 Conclusion on Margins:

"Consumer" segment has very little contribution to Operating Income, which means that declines in Desktops and Laptops may not be that significant. However, over 50% of Operating Income currently comes from "End User Computing" (mostly those two segments), so still significant enough for parties to be concerned over pricing pressure and falling market share. Furthermore, LBO analysis is highly sensitive to margins and even a 1% decline in Operating Margin would reduce IRR by close to 10%. As seen in the next few slides, declines in market share and/or market size in Dell's top three segments matter much less than its ability to maintain or increase its margins. However, with almost no data or insight into that, it is very hard to make a strong recommendation in favor of this deal.

7.9 The Numbers that work in Dell's favors

Sources and Uses and IRSS in Base Case Scenario (with two smaller add-on acquisitions of $1.5

billion and $2.0 billion):

Sources & Uses - Initial Transaction			
Sources:		**Uses:**	
Revolver:	$ -	Equity Value of Company:	$ 24,592
Term Loan B:	4,000	Refinance Existing Debt:	-
Term Loan C:	1,500	Assume Existing Debt:	9,085
ABL Facility:	2,000	Advisory Fees:	25
1st Lien Bridge Facility:	2,000	Capitalized Financing Fees:	77
2nd Lien Bridge Facility:	1,250	Legal & Misc. Fees:	30
Microsoft - Subordinated Note:	2,000	**Total Uses:**	**$ 33,808**
Assume Existing Debt:	9,085		
Company - Excess Cash:	6,220		
Founder - Cash Contribution for Equity:	750		
MD Investors - Founder Rollover Equity:	3,746		
Silver Lake - Investor Equity:	1,258		
Total Sources:	**$ 33,808**		

Sensitivity Analysis - 5-Year IRR to Silver Lake and Purchase Premium vs. Exit Multiple

Purchase Premium / Per-Share Price			Exit Multiple: 2.0 x	2.5 x	3.0 x	3.5 x	4.0 x	4.5 x	5.0 x	5.5 x	6.0 x
$ 15.78	45.0%		(0.5%)	8.2%	15.0%	20.6%	**25.5%**	29.8%	33.6%	37.0%	40.2%
$ 15.23	40.0%		3.5%	11.5%	17.9%	23.4%	**28.1%**	32.2%	36.0%	39.4%	42.5%
$ 14.69	35.0%		7.2%	14.7%	20.9%	26.1%	**30.7%**	34.8%	38.4%	41.8%	44.9%
$ 14.14	30.0%		10.8%	17.9%	23.8%	28.9%	**33.4%**	37.3%	40.9%	44.3%	47.3%
$ 13.60	25.0%		**14.3%**	**21.1%**	**26.8%**	**31.7%**	**36.1%**	**40.0%**	**43.5%**	**46.8%**	**49.8%**
$ 13.06	20.0%		17.8%	24.3%	29.8%	34.6%	**38.9%**	42.7%	46.3%	49.5%	52.5%
$ 12.51	15.0%		21.3%	27.6%	32.9%	37.6%	**41.8%**	45.6%	49.1%	52.3%	55.3%
$ 11.97	10.0%		24.9%	30.9%	36.1%	40.7%	**44.9%**	48.6%	52.0%	55.2%	58.2%
$ 11.42	5.0%		28.5%	34.4%	39.5%	44.0%	**48.0%**	51.8%	55.2%	58.3%	61.3%
$ 10.88	0.0%		32.2%	37.9%	42.9%	47.4%	**51.4%**	55.1%	58.5%	61.7%	64.6%

Even in the Downside Case:

If Dell's 3 top markets (Servers & Networking, Desktops, and Laptops) all decline by 10% per year (close to a 50% cumulative decline from Year 1 to Year 5) and its share stays roughly the same in each market:

Sensitivity Analysis - 5-Year IRR to Silver Lake and Purchase Premium vs. Exit Multiple

Purchase Premium / Per-Share Price			Exit Multiple:								
			2.0 x	2.5 x	3.0 x	3.5 x	4.0 x	4.5 x	5.0 x	5.5 x	6.0 x
$	15.78	45.0%	NM	(54.4%)	(26.1%)	(12.0%)	**(2.5%)**	4.7%	10.6%	15.6%	19.9%
$	15.23	40.0%	NM	(38.8%)	(18.7%)	(6.9%)	**1.6%**	8.2%	13.8%	18.5%	22.7%
$	14.69	35.0%	NM	(28.2%)	(12.5%)	(2.3%)	**5.4%**	11.6%	16.9%	21.4%	25.5%
$	14.14	30.0%	(43.4%)	(20.1%)	(7.1%)	2.1%	**9.2%**	15.0%	20.0%	24.4%	28.3%
$	13.60	25.0%	**(30.9%)**	**(13.2%)**	**(2.0%**	**6.2%**	**12.8%**	**18.4%**	**23.1%**	**27.3%**	**31.1%**
$	13.06	20.0%	(21.6%)	(7.2%)	2.7%	10.3%	**16.5%**	21.7%	26.3%	30.4%	34.1%
$	12.51	15.0%	(13.9%)	(1.7%)	7.2%	14.2%	**20.1%**	25.1%	29.6%	33.5%	37.1%
$	11.97	10.0%	(7.3%)	3.4%	11.6%	18.2%	**23.7%**	28.6%	32.9%	36.7%	40.3%
$	11.42	5.0%	(1.3%)	8.3%	15.9%	22.1%	**27.4%**	32.1%	36.3%	40.1%	43.5%
$	10.88	0.0%	4.3%	13.1%	20.1%	26.1%	**31.2%**	35.8%	39.8%	43.6%	47.0%

A potential 10-15% IRR is still not a total disaster but all of this assumes that its margin will increase by 1-2% over these five years, despite all the declining market sizes and stagnating shares.

7.10 Why the Numbers work:

The numbers work primarily because the company generates more than $3.0-3.5 billion in Free Cash Flow each year, even under pessimistic assumptions for market size growth and Dell's own share in each market. In addition, prior to the deal, it traded at an EV / EBITDA multiple of 3.9x (5.1 times purchase multiple), meaning that the yield is much higher than it would be for companies that are in healthier conditions. Plus, I am assuming that Dell repatriates close to $10 billion of overseas cash and puts it to use financing approximately $6 billion of the purchase price (after taxes owed on this cash). And then Michael Dell is rolling over all his equity, and the leverage ratio is fairly aggressive at 5.3x TTM EBITDA. The bottom line is that Silver Lake is contributing very little of its own equity ($1.3-$1.4 billion) for Free Cash Flow of several times that each year – even with no growth and multiple contraction, that is a winning formula.

About the Margins:

Base Case Scenario, Gross Margins and Operating Margins stay the same rather than increasing by 2% over the 5 years:

Sensitivity Analysis - 5-Year IRR to Silver Lake and Purchase Premium vs. Exit Multiple

Purchase Premium / Per-Share Price			Exit Multiple:								
			2.0 x	2.5 x	3.0 x	3.5 x	4.0 x	4.5 x	5.0 x	5.5 x	6.0 x
$	15.78	45.0%	(27.8%)	(12.9%)	(3.1%)	4.3%	**10.3%**	15.4%	19.8%	23.7%	27.2%
$	15.23	40.0%	(20.1%)	(7.7%)	1.0%	7.8%	**13.5%**	18.3%	22.5%	26.3%	29.7%
$	14.69	35.0%	(13.7%)	(3.0%)	4.9%	11.3%	**16.6%**	21.2%	25.3%	29.0%	32.3%
$	14.14	30.0%	(8.1%)	1.4%	8.7%	14.6%	**19.7%**	24.2%	28.1%	31.7%	34.9%
$	13.60	25.0%	**(3.0%)**	**5.6%**	**12.3%**	**18.0%**	**22.9%**	**27.1%**	**31.0%**	**34.5%**	**37.6%**
$	13.06	20.0%	1.8%	9.7%	16.0%	21.4%	**26.0%**	30.2%	33.9%	37.3%	40.5%
$	12.51	15.0%	6.4%	13.6%	19.6%	24.8%	**29.3%**	33.3%	36.9%	40.3%	43.4%
$	11.97	10.0%	10.7%	17.5%	23.2%	28.2%	**32.6%**	36.5%	40.1%	43.3%	46.4%
$	11.42	5.0%	15.0%	21.5%	26.9%	31.7%	**36.0%**	39.8%	43.3%	46.6%	49.6%
$	10.88	0.0%	19.3%	25.4%	30.7%	35.4%	**39.5%**	43.3%	46.7%	49.9%	52.9%

And if Gross Margin falls by less than 1% and EBIT Margin declines by 1.5%:

Sensitivity Analysis - 5-Year IRR to Silver Lake and Purchase Premium vs. Exit Multiple

Purchase Premium / Per-Share Price			Exit Multiple:								
			2.0 x	2.5 x	3.0 x	3.5 x	4.0 x	4.5 x	5.0 x	5.5 x	6.0 x
$	15.78	45.0%	NM	(66.6%)	(34.5%)	(19.2%)	**(9.3%)**	(1.8%)	4.2%	9.2%	13.5%
$	15.23	40.0%	NM	(46.2%)	(25.2%)	(13.1%)	**(4.5%)**	2.2%	7.7%	12.4%	16.6%
$	14.69	35.0%	(65.4%)	(33.3%)	(17.8%)	(7.7%)	**(0.1%)**	6.0%	11.2%	15.6%	19.6%
$	14.14	30.0%	(45.2%)	(23.9%)	(11.5%)	(2.8%)	**4.1%**	9.8%	14.6%	18.8%	22.6%
$	13.60	25.0%	**(32.1%)**	**(16.3%)**	**(5.9%)**	**1.8%**	**8.1%**	**13.4%**	**18.0%**	**22.0%**	**25.6%**
$	13.06	20.0%	(22.6%)	(9.9%)	(0.9%)	6.2%	**12.0%**	17.0%	21.3%	25.2%	28.7%
$	12.51	15.0%	(14.8%)	(4.1%)	3.9%	10.4%	**15.8%**	20.6%	24.7%	28.5%	31.9%
$	11.97	10.0%	(8.1%)	1.2%	8.5%	14.5%	**19.7%**	24.2%	28.2%	31.8%	35.1%
$	11.42	5.0%	(2.0%)	6.3%	13.0%	18.6%	**23.5%**	27.8%	31.7%	35.2%	38.5%
$	10.88	0.0%	3.6%	11.2%	17.4%	22.8%	**27.5%**	31.6%	35.4%	38.8%	42.0%

The Downside Cases:

The Street Consensus Case:

Sensitivity Analysis - 5-Year IRR to Silver Lake and Purchase Premium vs. Exit Multiple

Purchase Premium / Per-Share Price			Exit Multiple:								
			2.0 x	2.5 x	3.0 x	3.5 x	4.0 x	4.5 x	5.0 x	5.5 x	6.0 x
$	15.78	45.0%	NM	NM	NM	NM	**(77.2%)**	(42.5%)	(25.9%)	(15.4%)	(7.7%)
$	15.23	40.0%	NM	NM	NM	NM	**(52.7%)**	(31.0%)	(18.6%)	(9.9%)	(3.1%)
$	14.69	35.0%	NM	NM	NM	(67.5%)	**(37.6%)**	(22.4%)	(12.4%)	(4.9%)	1.1%
$	14.14	30.0%	NM	NM	NM	(46.6%)	**(27.1%)**	(15.4%)	(6.9%)	(0.3%)	5.2%
$	13.60	25.0%	**NM**	**NM**	**(59.2%)**	**(33.1%)**	**(18.9%)**	**(9.3%)**	**(1.9%)**	**4.1%**	**9.1%**
$	13.06	20.0%	NM	NM	(41.0%)	(23.3%)	**(12.0%)**	(3.8%)	2.8%	8.2%	12.9%
$	12.51	15.0%	NM	(51.9%)	(28.7%)	(15.4%)	**(6.0%)**	1.3%	7.3%	12.3%	16.7%
$	11.97	10.0%	NM	(35.8%)	(19.4%)	(8.5%)	**(0.4%)**	6.1%	11.6%	16.3%	20.5%
$	11.42	5.0%	(45.3%)	(24.4%)	(11.6%)	(2.4%)	**4.8%**	10.8%	15.9%	20.4%	24.4%
$	10.88	0.0%	(30.7%)	(15.3%)	(4.7%)	3.3%	**9.9%**	15.4%	20.2%	24.4%	28.3%

Own Downside Case:

Sensitivity Analysis - 5-Year IRR to Silver Lake and Purchase Premium vs. Exit Multiple

Purchase Premium / Per-Share Price			Exit Multiple:								
			2.0 x	2.5 x	3.0 x	3.5 x	4.0 x	4.5 x	5.0 x	5.5 x	6.0 x
$	15.78	45.0%	NM	NM	NM	NM	**NM**	NM	NM	NM	NM
$	15.23	40.0%	NM	NM	NM	NM	**NM**	NM	NM	NM	NM
$	14.69	35.0%	NM	NM	NM	NM	**NM**	NM	NM	NM	NM
$	14.14	30.0%	NM	NM	NM	NM	**NM**	NM	NM	NM	NM
$	13.60	25.0%	**NM**	**NM**	**NM**	**NM**	**NM**	**NM**	**NM**	**NM**	**NM**
$	13.06	20.0%	NM	NM	NM	NM	**NM**	NM	NM	NM	NM
$	12.51	15.0%	NM	NM	NM	NM	**NM**	NM	NM	NM	(56.6%)
$	11.97	10.0%	NM	NM	NM	NM	**NM**	NM	NM	(55.7%)	(38.8%)
$	11.42	5.0%	NM	NM	NM	NM	**NM**	NM	(54.7%)	(37.9%)	(26.6%)
$	10.88	0.0%	NM	NM	NM	NM	**NM**	(53.8%)	(37.0%)	(25.6%)	(17.0%)

The question becomes: "Will Margins really fall?"

That is the main point of this deal, which is very difficult to say with the limited information in hand. If "End User Computing" really contributes over 50% of Operating Income and the company comes under even more price pressure there, margins could easily fall. Increasing software/services revenue would help, but those segments are not growing quickly enough to offset the decline in Operating Income from desktops and laptops. This means that there is not much of a margin of safety for this deal in case everything goes wrong. I have used most of the excess cash to fund the initial deal, and even add-on acquisitions will not help much so this is a

case where the deal could potentially work well, but also where the "Downside" cases are too extreme to overlook.

"Will acquisitions help?"

Base Case Sensitivities for Acquisition Size and Operating Income Yield

Sensitivity Analysis - 5-Year IRR to Silver Lake and Size of Acquisition 1 vs. Acquisition 1 Yield (Acquisition 2 is 33% Bigger)

Purchase Price for Acquisition 1 (50% Debt and 50% Equity Payment)	Operating Income Yield on Acquisition 1 and 2 Purchase Prices:								
	(4.0%)	(2.0%)	0.0%	2.0%	4.0%	6.0%	8.0%	10.0%	12.0%
$ 4,500	15.2%	18.4%	21.4%	24.2%	**26.8%**	29.3%	31.6%	33.8%	35.9%
$ 4,000	19.0%	21.7%	24.2%	26.6%	**28.8%**	30.9%	33.0%	34.9%	36.7%
$ 3,500	22.6%	24.8%	26.8%	28.8%	**30.7%**	32.5%	34.2%	35.9%	37.5%
$ 3,000	25.9%	27.6%	29.3%	30.9%	**32.4%**	33.9%	35.3%	36.7%	38.0%
$ 2,500	**28.8%**	**30.1%**	**31.4%**	**32.7%**	**33.9%**	**35.1%**	**36.2%**	**37.4%**	**38.4%**
$ 2,000	31.2%	32.2%	33.2%	34.2%	**35.1%**	36.0%	36.9%	37.7%	38.6%
$ 1,500	33.1%	33.8%	34.5%	35.2%	**35.8%**	36.5%	37.1%	37.7%	38.3%
$ 1,000	34.3%	34.7%	35.1%	35.5%	**35.9%**	36.3%	36.7%	37.1%	37.5%
$ 500	34.2%	34.4%	34.6%	34.8%	**35.0%**	35.1%	35.3%	35.5%	35.7%
$ -	32.3%	32.3%	32.3%	32.3%	**32.3%**	32.3%	32.3%	32.3%	32.3%

Where margins stay the same:

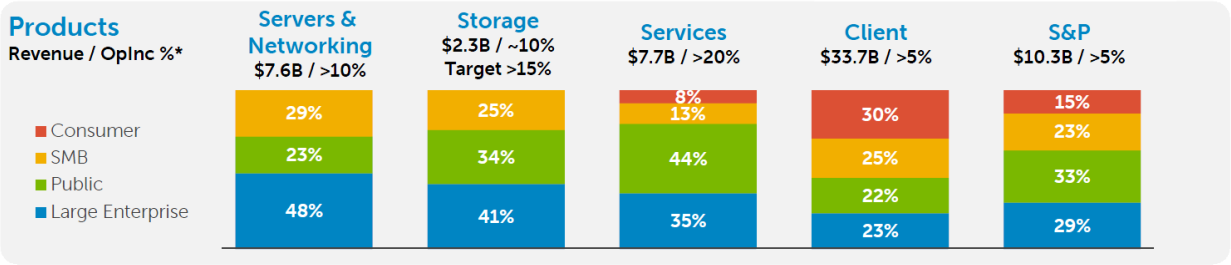
Sensitivity Analysis - 5-Year IRR to Silver Lake and Size of Acquisition 1 vs. Acquisition 1 Yield (Acquisition 2 is 33% Bigger)

Purchase Price for Acquisition 1 (50% Debt and 50% Equity Payment)	Operating Income Yield on Acquisition 1 and 2 Purchase Prices:								
	(4.0%)	(2.0%)	0.0%	2.0%	4.0%	6.0%	8.0%	10.0%	12.0%
$ 4,500	(10.3%)	(4.6%)	0.4%	4.9%	**9.0%**	12.7%	16.0%	19.2%	22.1%
$ 4,000	(4.3%)	0.3%	4.5%	8.2%	**11.6%**	14.8%	17.7%	20.5%	23.0%
$ 3,500	1.4%	5.0%	8.3%	11.4%	**14.2%**	16.9%	19.3%	21.7%	23.9%
$ 3,000	6.5%	9.3%	11.9%	14.3%	**16.7%**	18.8%	20.9%	22.9%	24.7%
$ 2,500	**11.1%**	**13.2%**	**15.2%**	**17.1%**	**18.9%**	**20.6%**	**22.3%**	**23.9%**	**25.4%**
$ 2,000	15.2%	16.7%	18.2%	19.6%	**20.9%**	22.2%	23.5%	24.7%	25.9%
$ 1,500	18.7%	19.7%	20.7%	21.6%	**22.6%**	23.5%	24.4%	25.3%	26.1%
$ 1,000	21.3%	21.9%	22.5%	23.1%	**23.6%**	24.2%	24.8%	25.3%	25.9%
$ 500	22.8%	23.1%	23.3%	23.6%	**23.9%**	24.1%	24.4%	24.6%	24.9%
$ -	22.6%	22.6%	22.6%	22.6%	**22.6%**	22.6%	22.6%	22.6%	22.6%

Bigger acquisitions generally reduce IRR because Silver Lake chips in more equity – would only improve things at higher yields of above 15-20%.

7.11 Hypothesis: The criteria to make this deal work:

1) Certainty in the maintenance or increase of margins, which will increase the margin of safety
2) Detailed breakout of Operating Income by product segment and if the decline in desktops and laptops did not make a substantial difference:



3) Clear buyer for Dell's entire business in several years because selling off business lines separately is very hard.
4) If there were several other viable acquisition targets (that had not already been acquired by IBM or HP) that could be acquired for < 5-6x EBIT and contribute substantially to Dell's net income.

Southeastern's Valuation:

Valuation Summary (per share)		
Net cash [1]	$	3.64
DFS [2]		1.72
Acquisitions since 2008 [3]		7.58
Server Business [4]		4.44
Support and Deployment [5]		3.89
PC Business [6]		2.78
Software and Peripherals [7]		1.67
Unallocated Expenses [8]		-1.00
DFS value embedded in segments [9]		-1.00
Total	**$**	**23.72**

Dell probably is worth more than $13.65 per share since net cash alone accounts for more than $3.50 of that value. However, $24.00 per share seems quite optimistic, perhaps something in the $15.00 - $20.00 range (and the LBO still works in that range). Biggest question arises is the true value of those acquisitions since 2008 and what segments they contributed to and can the different business units be sold off separately?

7.12 Conclusions:

I recommend against the deal and acquiring Dell in a Leveraged Buyout (LBO) transaction, due to uncertainty around margins and the inability to make high-yielding add-on acquisitions. Most commentary focused on the decline in the desktop and laptop markets, but those are far less significant than even slight margin changes. Client computing is lower margin but it still contributes over one-third of Dell's Free Cash Flow, if not more. Despite Dell's claims of 15% IRR on its acquisitions, its most recent deals have yielded less than 5% Operating Income. The question then becomes will future deals really help? In more optimistic scenarios, IRR numbers look very positive. However, if the situation becomes worse, in which market sizes and margins decline, investors have very little protection and far too much downside risk. If additional data / insight into margins by segment and trends are provided, I might change this conclusion, but this is my current view.

8.0 Closing Remarks:

Without the help of Professor John Hasseldine, professionals from Ho Chi Minh Securities Corporation, as well as the online detailed instructions from the Financial Modeling course Breaking into Wall Street, I would not be able to finish this project within the Fall Semester 2013. Throughout the process of building this Dell – Silver Lake LBO model, I was introduced to new technical skills, especially Excel and financial modeling, which would prove to be applicable to my future internships and jobs. In addition, my writing skill was honed throughout the process and I have developed great researching and data mining skills when scrutinizing earning calls/reports/and SEC documents.

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SEC Schedule 14A – Proxy Statement Dell Inc. Retrieved from:
http://www.sec.gov/Archives/edgar/data/826083/000119312513134486/d505470dprem14a.htm