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## **Case Study: Dell's Working Capital Management**

Dell is a global information technology group established in 1984 by Michael Dell. It offers a broad range of products, including desktop personal computers (PC), servers, networking products, storage, mobility products, software and peripherals, and services. The company primarily operates in the US, headquartered in Round Rock, Texas and employs over 100 thousand people (approx. 40 th of them located in U.S.). It is May 2013 and Mary Hope, a consultant at an international consultancy firm, has been asked to give a presentation to a group of European consumer electronics producers. Namely, Dell has been recently admired for its supply-chain management and e-commerce by its competitors and they would like to understand better how Dell's working capital management process works. Therefore, Mary Hope is expected to analyse thoroughly the working capital indicators and working capital management process of Dell and to give them an overview of its main strengths and weaknesses during a meeting that is going to take place within a few days. She has already gathered a significant amount of information from Dell's web page and financial statements including details on company background and financial indicators. What would you like to say if you were in Mary Hope's shoes?

### **Company History**

1984 – At age 19, Michael Dell founds PC's Limited with \$1,000. The company puts together computers from components and sells them directly to customers.

1985 – The company designs and builds its first computer system, the Turbo PC, featuring an Intel® 8088 processor running at 8MHz, a 10MB hard drive and a 5.25" floppy drive.

1987 – The company opens its first international subsidiary in the United Kingdom.

1988 – The company is renamed Dell Computer Corporation. Dell completes its initial public offering, raising \$30 million and increasing market capitalization from \$1,000 to \$85 million. The newly acquired capital is used to expand its product offerings and global presence.

1989 – Dell joins the mobile computing revolution with its first laptop computer, the 316LT.

1990 – The company opens a manufacturing centre in Limerick, Ireland, to better serve customers in Europe, the Middle East and Africa.

1991 – International sales more than double for the third consecutive year.

1992 – Dell debuts on the Fortune 500. Michael Dell becomes the youngest CEO to lead a company that receives this honour.

1994 – Dell introduces the Dell™ PowerEdge™ server line and as part of the Latitude™ XP Launch, they are the first to introduce the Lithium-ion battery, which breaks every industry record for battery life.

1995 – Dell expands worldwide operations in Europe, Asia, Japan and the Americas.

1996 – The company launches Dell.com and takes sales online. It generates \$1 million in sales per day just six months after the web site went live.

1997 – Dell opens its second manufacturing centre in Texas and achieves the lowest inventory levels in the industry at 15 days. The company ships its 10-millionth PC and launches its Dell Precision™ line of workstations to target high-end, high-performance graphics application users.

1998 – Dell opens a new integrated sales, manufacturing and support centre in Xiamen, China and announces the opening of manufacturing sites in Ireland, Brazil and the United States.

1999 – Dell takes technical support online with eSupport, an online tool that facilitates and delivers technical support via the internet. By the end of the year, Dell ranks No. 1 in PCs in the U.S., No. 1 worldwide in PCs for large and medium businesses and No. 1 in worldwide workstation shipments.

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2000 – Internet sales on dell.com reach \$40 million a day, making it one of the highest-volume e-commerce sites in the world.

2001 – Dell becomes the No. 1 computer systems provider worldwide, and reaches No. 1 in U.S. Intel-based server shipments. Dell launches its PowerConnect™ line of network switches entering into the networking equipment market.

2002-2003 – Dell expands its products entering into consumer electronics market. The company is rebranded to Dell Inc.

2006 – The company acquires gaming leader Alienware™ to complement high-performance systems designed for gaming enthusiasts and media content customers. The company also begins to offer free product recycling for consumers worldwide and connects with customers with the launch of Direct2Dell — a blog that enables fast, direct, two-way conversations with customers.

2007 – Dell introduces the Vostro™ family, flagship line of solutions tailored to small businesses, and joins Twitter, launching the first investor relations blog, and debuts IdeaStorm.com, a destination where customers can post and share ideas.

2008 – Dell acquires storage leader EqualLogic™, growing their original customer base of 1,000 to 25,000 worldwide in the first two years. The company also launches its first Modular Data Center — a mobile, self-contained data centre optimized for cloud-computing applications.

2009 – Dell acquires Perot Systems, launches a new business called Dell™ Services that gives customers end-to-end IT services to help lower their total cost of IT ownership and enters the smartphone market with the Mini 3i from China Mobile.

2010 - Dell acquires key intellectual properties in storage, systems management, cloud computing and software: Boomi®, Exanet, InSite One®, KACE™, Ocarina™ Networks, Scalent™ and Dell Compellent®. The company wins more than 300 industry awards in 2010 and enters the tablet arena with the Streak, a 5-inch device designed to provide the best on-the-go entertainment, social connection and navigation experience.

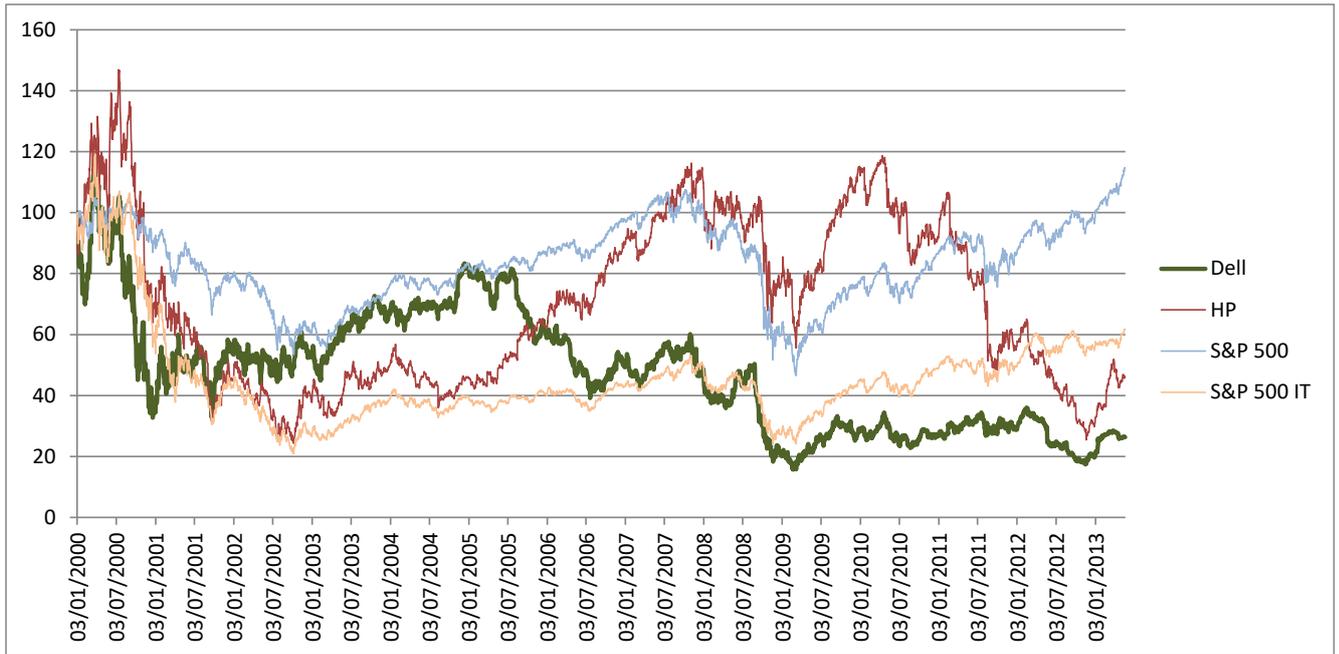
2011 - Dell acquires Secure Works, RNA Networks and Dell Force10 Networks, leaders in enterprise solutions and services and commits \$1 billion to develop Dell data and solution centres around the world and open R&D centers in Israel and the U.S.

2012 – Dell establishes a new software group and focuses on four key growth areas: end user computing, enterprise solutions, software and services. The company continues to invest to meet customers' end-to-end IT needs by acquiring AppAssure, SonicWALL, Clarity, Make Technologies, Wyse, Quest, Gale Technologies and Credant.

### **Corporate Structure and Reporting**

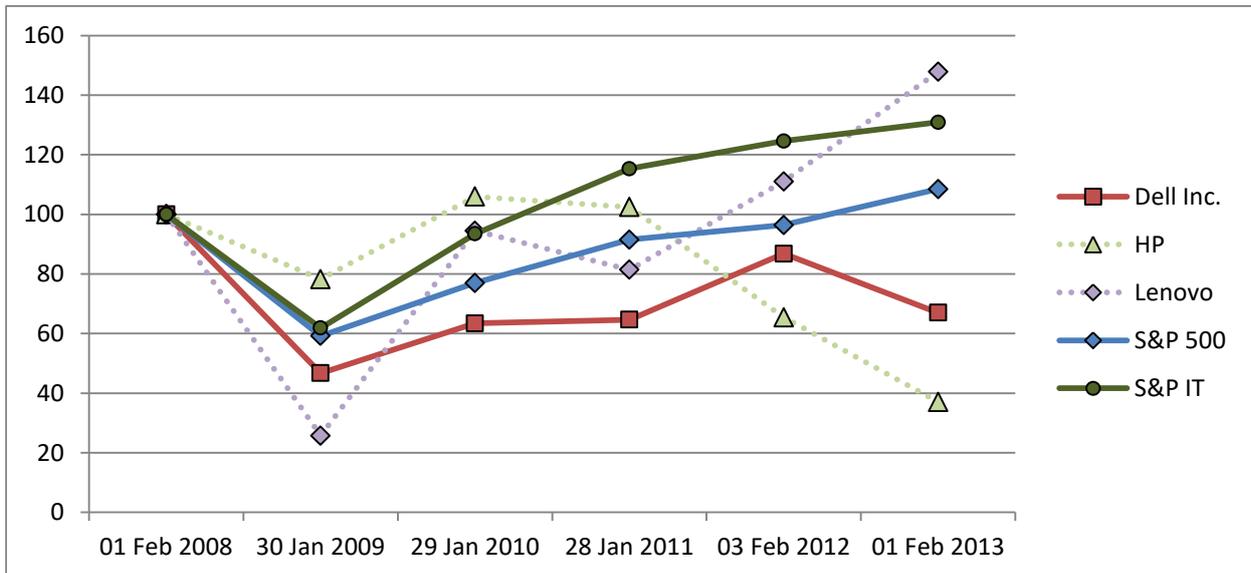
Dell Inc. is a holding company that conducts its business worldwide through its subsidiaries. The CEO of the parent company is Michael Dell, the same person who established the company in 1984. The global corporate headquarter is located in Round Rock, Texas. However, operations take place in many countries in the Americas, Europe, the Middle East, Asia and other geographic regions. Still, the group has significant U.S. dependence and presence as approximately 50% of sales originate from the U.S and 68% of long-lived assets are located in the U.S.

Dell Inc.'s shares are listed on the NASDAQ Global Select Market of The NASDAQ Stock Market LLC under the symbol DELL. The share performance in comparison to some benchmarks for a period starting from 2000 is depicted on Figure 1.



**Figure 1.** Dell Inc.'s share price performance compared to benchmarks (Datastream).  
 Note: 100 is 3 Jan 2000.

As the former figure depicts very volatile movements, Figure 2 depicts the annual developments taking Feb 2008 as 100.



**Figure 2.** Dell Inc.'s share price performance compared to benchmarks at the end of each financial year (Datastream)  
 Note: 100 is 1 Feb 2000.

Dell's fiscal year is the 52 or 53 week period ending on the Friday nearest to January 31. The fiscal year 2013 ended February 1, 2013 and included 52 weeks, while the fiscal years 2012 and 2011 ended February 3, 2012 and January 28, 2011 and included 53 weeks and 52 weeks respectively. The consolidated financial statements of Dell Group can be found from Appendix 1 to 3.

### Business Strategy, Customers and Products

Dell's mission is to be the most successful computer company in the world at delivering the best customer experience in markets it serves.

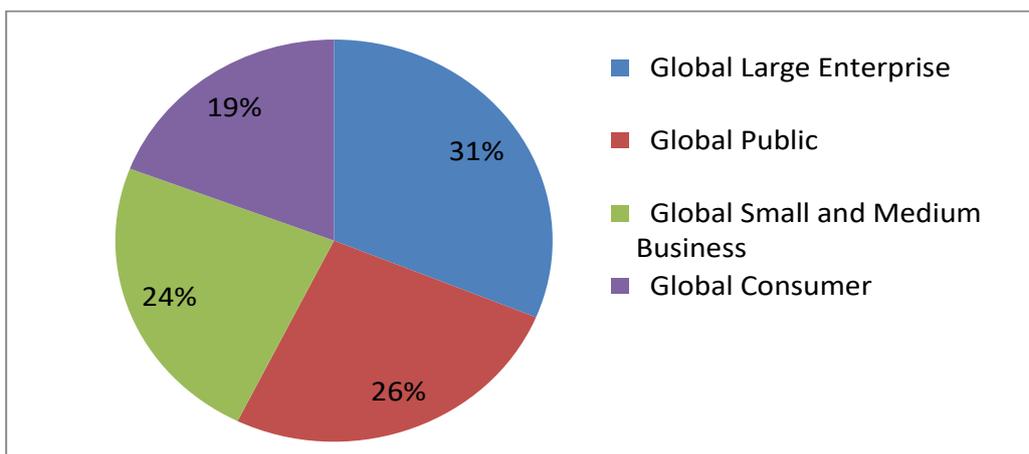
Dell built its reputation as a leading technology provider through listening to customers and developing solutions that meet customer needs. A few years ago, it initiated a broad transformation of the company to become an end-to-end technology solutions provider. It is believed that changing the corporate structure and aligning it with product and services business units will allow Dell to better serve and demonstrate its solutions' capabilities to its customers and execute its strategy. This change will correspond with how Dell intends to manage the performance of its product and services offerings. Starting from the first quarter of fiscal year 2014, Dell intends to continue with the following segment distribution:

- End-User Computing Group ("EUC") - notebooks, desktop PCs, thin client products, tablets, third-party software, and client-related peripherals.
- Enterprise Solutions Group ("ESG") - servers, networking, storage, converged infrastructure offerings, and ESG-related peripherals.
- Dell Services - broad range of IT and business services, including support and deployment services, infrastructure, cloud, and security services, and applications and business process services.
- Dell Software Group - systems management, security, and information management.

Until 2014 Dell employs the customer-based segmentation approach:

- Large Enterprise - large global and national corporate businesses. Focus is on delivering innovative solutions and services through data centre and cloud computing solutions.
- Public - educational institutions, government, health care, and law enforcement agencies. Objective is to deliver services satisfying their broad range of unique IT needs.
- Small and Medium Business ("SMB") - small and medium-sized businesses. Focus is on offering scalable products, services, and solutions including server and storage virtualization, SMB-specific solutions.
- Consumer - delivering what customers want from the total technology experience of entertainment, mobility, gaming, and design.

The customer base has so far remained diversified with no single customer accounting from more than 10% of consolidated sales. The distribution of sales between the customer segments as at the end of financial year ended on 1 February 2013 is presented on Figure 3.



**Figure 3.** Distribution of sales by segments for financial year ended 1 Feb 2013 (Dell's 2013 annual report)

Dell's products include:

- Mobility – laptops, tablets and mobile workstations.
- Desktop PC-s – desktop computer systems and fixed workstations.
- Servers and networking – Servers include high performance rack, blade, tower, and hyperscale servers for enterprise customers and value tower servers. Networking solutions are designed to lower data centre operating costs and improve manageability in high performance computing environments.

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- Software and peripherals – include third-party software sold with products as well as wide range of peripherals (monitors, printers, projectors etc).
- Services – configurable IT and business services including infrastructure technology, security, cloud, consulting and applications and product-related support services.
- Storage – storage area networks, network-attached storage, direct-attached storage and various backup systems.

Although historically Dell has been mainly a manufacturer of PCs, it has recently announced its intentions to move from product to services-based business model. Mixing hardware, software and services, to automate the business by providing more services as Web-based offerings, delivered remotely from Dell data centres in the so-called cloud model. An overview of the group's main products as a % of sales in financial year 2012/13 is presented on Figure 4.

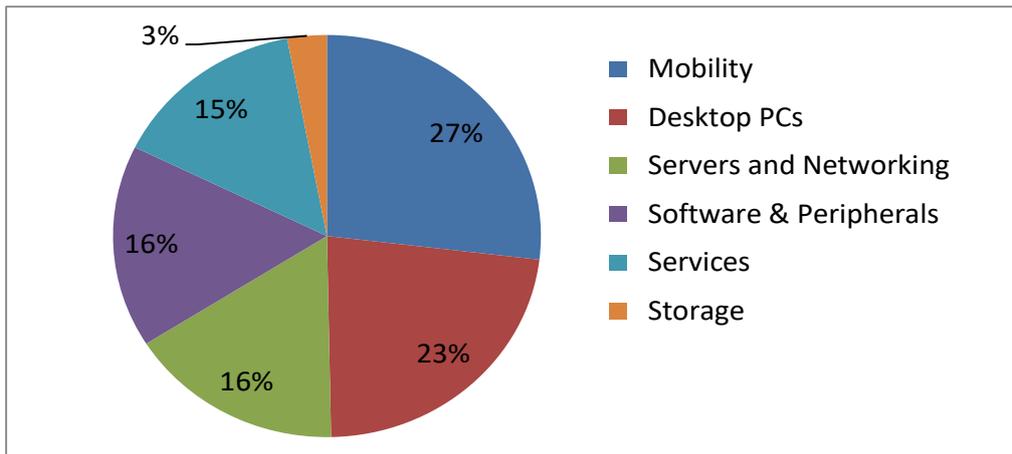


Figure 4. Distribution of sales by products for financial year ended 1 Feb 2013 (Dell's 2013 annual report)

### Market share and main competitors

As can be seen from Appendix 4 Dell is one of the biggest players on the world's PC market ranking 3<sup>rd</sup> on desktop PC and 5<sup>th</sup> on portable PC market as at the end of January 2013. Still, its market share has had a declining trend (see Figure 5).

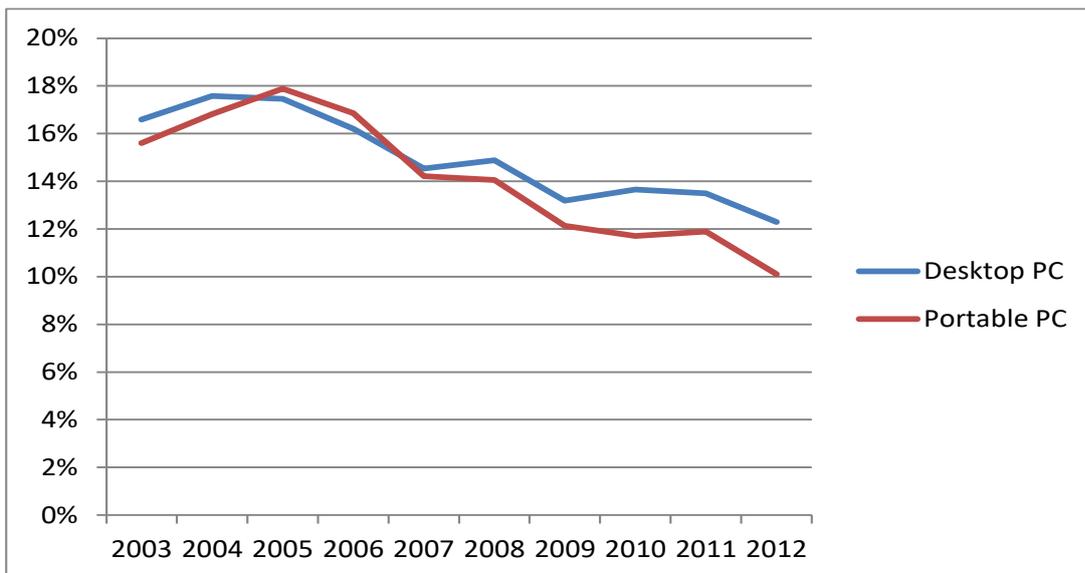


Figure 5. Dell's market share on the global market (Dell's 2013 annual report)

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In terms of computer peripheral equipment and software wholesale market Dell is one of the leading players. On the external controller-based disk storage systems market the company is the 6<sup>th</sup> player with ~ 7% market share and on servers' market it is the 3<sup>rd</sup> with 16% market share. (Datamonitor, 2012)

Dell's main competitors on the PC market are HP (16% market share), Lenovo (15% market share, successor of IBM-s computer production business), followed by Acer and Asus. The main financial indicators of the two biggest competitors are depicted in Appendix 5.

### **Purchases**

Dell purchases materials, supplies, product components, and products from a large number of vendors. All components are bought from third-party vendors located outside the U.S. The company maintains several single-source supplier relationships incl. with third-party software providers. This is due to lack of multiple sources or because the relationship is advantageous due to performance, quality, support, delivery, capacity, or price considerations. This means that if a single- or limited-source supplier's product or component is delayed, there could be Dell's product shipment delays. If such single-supplier products were to become obsolete or incompatible with Dell's newer products, there could be problems with replacing the supplier. Still, Dell believes that any disruption that may occur because of its dependence on single- or limited-source vendors would not disproportionately disadvantage the company relative to its competitors.

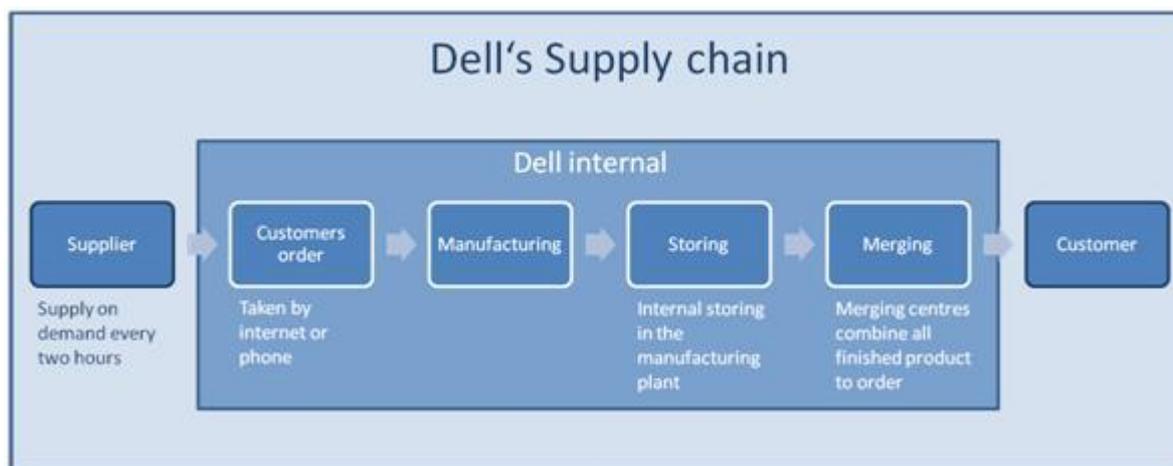
In terms of Dell's gross margin a critical component of purchases is the price. The purchases may involve vendor rebates, marketing funds and other vendor funding. The size of these depends on the existing contracts and negotiation results. Vendor rebate programs enable to reduce the cost of goods sold and these programs are generally short-term programs (re-negotiated quarterly) and based on purchased product volumes.

### **Production process and inventory management**

Dell is one of the most successful implementers of just-in-time (JIT) principles and its business model has been based on built-to-order principles, meaning that a computer is usually not assembled until a customer has configured it according to their specific demands. The customer order is transferred electronically from Dell's ordering system to manufacturing scheduling system. Every two hours the orders are sequenced into production schedule. The closest manufacturing centre to the customer receives the order through the order entry system. Dell's manufacturing facilities are located in Austin, Texas; Penang, Malaysia; Chengdu, China; Xiamen, China; Hortolândia, Brazil; Chennai, India; and Lodz, Poland. Although historically quite a lot of manufacturing took place in the US, since 2010 most of the manufacturing in these facilities was transferred to contract manufacturers located in overseas locations due to cost efficiency considerations. Today significant portions of Dell's products are assembled not by Dell itself but by contract manufacturers, primarily in various locations in Asia. A significant concentration of this outsourced manufacturing is currently performed by only a few contract manufacturers, often in single locations. This means that Dell sells components to these contract manufacturers and generates large non-trade accounts receivables, an arrangement that would present a risk of uncollectibility if the financial condition of a contract manufacturer should deteriorate. While these relationships generate cost efficiencies, they reduce Dell's direct control over production. The increasing reliance on these vendors subjects the company to a greater risk of shortages and reduced control over delivery schedules of components and products, as well as a greater risk of increases in product and component costs, timely shipment and quality issues.

Each manufacturing centre is surrounded by supplier logistics centres owned by the different suppliers of Dell parts. Dell's built-to-order system generates requests for materials from suppliers every 2 hours in every manufacturing centre (see Figure 6). It means that each production centre tells each supplier logistics centre what quantities of what parts it wants delivered within the next 90 minutes - and not one minute later. Within 90 minutes, trucks from the various supplier logistics centres arrive at Dell manufacturing plant and unload the parts needed for all computers ordered in the last two hours. Meaning that the lead times on components are very small and the inventory is carried mainly by suppliers.

When the components arrive, the manufacturing process begins. It takes 30 minutes to unload the parts, register their barcodes, and put them into the bins for assembly. Then the computer is assembled, software installed, functional testing done and quality control performed.



**Figure 6:** Dell's supply chain <http://oscarmorant2011.files.wordpress.com/2011/05/supplychain.jpg>

The finished product is either shipped immediately or transported to order accumulation area. The latter is used in case the order includes different items (as different items may not be finished at the same time). If the order includes items from other manufacturing sites, the items are shipped first to a merge centre where printers, monitors or other items are added, the shipment is combined into one and sent off to the customer. By following these rules, Dell can keep their inventory levels very low and the customer receives exactly what he ordered with one delivery.

Dell's business model generally gives a flexibility to manage product backlog at any point in time by expediting shipping or prioritizing customer orders toward products that have shorter lead times, thereby reducing product backlog and increasing current period revenue.

The details on Dell's inventory levels by type of inventory are provided in Table 1.

**Table 1.** Inventories

	Fiscal year-end results							
	29-Jan-10		28-Jan-11		03-Feb-12		01-Feb-13	
Production materials	487	46%	593	46%	753	54%	593	43%
Work-in-process	168	16%	232	18%	239	17%	283	20%
Finished goods	396	38%	476	37%	412	29%	506	37%
<b>Total inventories, net</b>	<b>1,051</b>	<b>100%</b>	<b>1,301</b>	<b>100%</b>	<b>1,404</b>	<b>100%</b>	<b>1,382</b>	<b>100%</b>

### Competition and sales process

The rapid technological advances in hardware, software, and service offerings mean that Dell faces on-going product and price competition in all areas of its business including from both branded and generic competitors. To meet changing customer demands, Dell focuses a lot on customer relationships. Most of the sales of products and services are made directly to customers. Still, the distribution channels used include also retailers, third-party solution providers, system integrators and third-party resellers. Large businesses and institutional customers are served by enterprise solution specialists who assist, develop tailored solutions to these customers and bring customer feedback to the group. To get more feedback from customers Dell has opened an Internet website called Dell IdeaStorm where customers may offer suggestions for current and future Dell products, services and operations. The company also tracks the Net Promoter Score, a customer loyalty metric that is widely used across various industries and engaged with customers through social media communities on [www.dell.com](http://www.dell.com) and in external social media channels.

The sales are accounted for as soon as the products apart from Dell. Part of the sales are seasonal: government customers buy more in the 3<sup>rd</sup> quarter of the fiscal year and sales in Europe, the Middle East, and Africa are typically strongest on the 4<sup>th</sup> fiscal quarter.

Dell offers also possibilities for its US and Canadian customers to finance their purchases through Dell Financial Services by offering (see also Table 2 for numbers):

- Fixed-term leases and loans (divided into consumer and small commercial; medium and large commercial)
  - Fixed-term leases are generally for 2 to 4 years and offered to qualified small and medium-sized businesses, large commercial accounts, governmental organisations, and educational entities. Dell retains a residual interest in leased equipment leased under its fixed-term lease programs and the amount of this interest is established at the inception of the lease based upon estimates of the value of the equipment at the end of the lease term.
  - Fixed-term loans are offered to qualified small businesses, large commercial accounts, governmental organizations, educational entities, and certain individual consumer customers. These loans are repaid in equal payments including interest and have defined terms of generally 3 to 4 years.

Fixed term leases and loans are divided into short-and long-term amounts and stated on the balance sheet under assets.

- Revolving loans - are offered under private label credit financing programs:
  - Dell Preferred Account is offered to individual customers and
  - Dell Business Credit to small and medium-sizes business customers.

Revolving loans in the U.S. bear interest at a variable annual percentage rate that is tied to the prime rate. Based on historical payment patterns, revolving loan transactions are typically repaid within 12 months on average. Revolving loans are included under short-term financing receivables.

**Table 2.** Customer receivables and financing

	Fiscal year-end results							
	29-Jan-10		28-Jan-11		03-Feb-12		01-Feb-13	
Gross accounts receivable	5,952		6,589		6,539		6,701	
Allowance for doubtful accounts <sup>a</sup>	(115)	1.9%	(96)	1.5%	(63)	1.0%	(72)	1.1%
<b>Total accounts receivable, net</b>	<b>5,837</b>		<b>6,493</b>		<b>6,476</b>		<b>6,629</b>	
Revolving financing receivables <sup>b</sup>	1,822	67%	2,182	60%	1,917	58%	1,665	52%
Fixed-term financing receivables <sup>b</sup>	884	33%	1,461	40%	1,410	42%	1,548	48%
<b>Total short-term financing receivables, net<sup>b</sup></b>	<b>2,706</b>	<b>100%</b>	<b>3,643</b>	<b>100%</b>	<b>3,327</b>	<b>100%</b>	<b>3,213</b>	<b>100%</b>
Revolving financing receivables <sup>c</sup>	-	0%	-	0%	-	0%	-	0%
Fixed-term financing receivables <sup>c</sup>	332	100%	799	100%	1,372	100%	1,349	100%
<b>Total long-term financing receivable, net<sup>c</sup></b>	<b>332</b>	<b>100%</b>	<b>799</b>	<b>100%</b>	<b>1,372</b>	<b>100%</b>	<b>1,349</b>	<b>100%</b>
<b>Total financing receivables</b>	<b>3,038</b>		<b>4,442</b>		<b>4,699</b>		<b>4,562</b>	
incl. customer receivables gross	2,870		4,388		4,539		4,369	
incl. allowances for losses <sup>d</sup>	(237)	8.3%	(241)	5.5%	(202)	4.5%	(192)	4.4%
incl. residual interest	405		295		362		385	
Customer receivables gross	n/a		4,388		4,539		4,369	
incl. overdue 1 to 90 days <sup>d</sup>	n/a		346	7.9%	382	8.4%	376	8.6%
incl. overdue over 90 days <sup>d</sup>	n/a		102	2.3%	94	2.1%	82	1.9%

**Notes:**

<sup>a</sup> % represents allowance for doubtful accounts to gross accounts receivable.

<sup>b</sup> % represents % to short-term financing receivables

<sup>c</sup> % represents % to long-term financing receivables

<sup>d</sup> % represents % to gross customer receivables financed

During 2012, Dell entered into a definitive agreement to acquire CIT Vendor Finance's Dell-related financing assets portfolio and sales and servicing functions in Europe for approximately \$500 million. CIT Vendor Finance is currently preferred vendor for Dell's financing operating in more than 25 countries. Subject to customary closing, regulatory, and other conditions, the transaction is expected to be completed in 2014. In connection with this transaction, Dell has filed an application for a bank license with The Central Bank of Ireland to facilitate

on-going financing offerings in Europe. CIT Vendor Finance will also continue to provide financing programs with Dell in selected countries around the world after completion of this transaction.

To protect its position on the market, Dell holds a worldwide portfolio of 4129 patents (2291 patent applications are pending) and holds licences to use numerous third-party patents. On-going R&D activities are conducted to replace expiring patents covering aspects of company's current and possible future computer system products, manufacturing processes, and related technologies. This activity enables to establish entry barriers in many product lines. Important factor in maintaining its competitive position lies in its trademark: DELL word mark and Dell logo mark have been registered in US along with 158 other trademarks. DELL word mark has been also registered in approximately 182 countries. Its brand value has been ranked as 72nd in the global 500 rankings in 2012 (Datamonitor, 2012). Although Dell does significant R&D work, its R&D spending (1.4% of revenues) has been lower than that of HP (2.6%) and IBM (5.9%). As a result, the company owns fewer patents than its competitors.

Still, the competitive environment remains intense as the industry expands globally and product wise (e.g. mobile and cloud computing solutions) and the generally low industry barriers make it easy for newcomers to enter the market.

### Financing

Dell's financing sources are summarised in Table 3.

**Table 3.** Sources of financing

	Fiscal year-end results			
	03-Feb-12		01-Feb-13	
Cash and cash equivalents	13,852	65%	12,569	69%
incl. money market funds	8,370	39%	8,869	48%
incl. commercial papers	2,016	9%	0	0%
Investments	4,370	21%	2,773	15%
incl. debt securities	4,251	20%	2,503	14%
incl. equity and other securities	107	1%	113	1%
incl. derivative instruments	140	1%	68	0%
Unsecured revolving credit facilities	3,000	14%	3,000	16%
<b>Total cash, cash equivalents, investments and available borrowings</b>	<b>21,222</b>	<b>100%</b>	<b>18,342</b>	<b>100%</b>
Short-term borrowings	2,867	31%	3,843	42%
incl. commercial paper	1,500	16%	1,807	20%
incl. short-term structured financing debt	440	5%	416	5%
incl. current portion of long-term debt	924	10%	1,618	18%
incl. other	3	0%	2	0%
Long-term debt	6,387	69%	5,242	58%
incl. senior notes	5,083	55%	3,991	44%
incl. senior debentures	384	4%	379	4%
incl. long-term financing debt	920	10%	872	10%
<b>Total debt</b>	<b>9,254</b>	<b>100%</b>	<b>9,085</b>	<b>100%</b>
Senior notes and debentures	6,391	69%	5,988	66%
Structured financing debt	1,360	15%	1,288	14%
Commercial paper	1,500	16%	1,807	20%
Other	3	0%	2	0%
<b>Total debt</b>	<b>9,254</b>	<b>100%</b>	<b>9,085</b>	<b>100%</b>

*Notes: all % in the upper part are to total cash, cash equivalents, investments and available borrowing and all % in the bottom part to total debt.*

Cash equivalents consist mostly of money market funds and corporate commercial paper. The investments are mostly the amounts invested in fixed income securities of varying maturities. Equity and other securities are

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related to Dell's Deferred Compensation Plan and derivative instruments relate to foreign currency forwards, options and interest rate swaps. Investment portfolio is diversified and third-party investment managers are used to preserve principal while also maximising the return on these investments. Dell has access to 3 bio USD unsecured revolving credit facilities (primarily to support commercial paper program). However, as on 1 Feb 2013 and 3 Feb 2012 no amounts were outstanding under these facilities.

Dell has issued senior notes and commercial papers. Structured financing debt is used to fund financing receivables (see Table 2). Namely Dell uses securitisation programs to fund revolving loans and fixed term leases and loans through consolidated special purpose entities (SPEs). These SPEs set up financing arrangements with multi-seller conduits that issue asset-backed debt securities in the capital markets. These programs generally last for 12 months. Under the effective merger agreement Dell may not incur debt under these programs of more than 1.5 bio USD.

### **Concluding Remarks**

Dell offers a broad range of products including including desktop personal computers (PC), servers, networking products, storage, mobility products, software and peripherals, and services. It has been historically quite successful in implementing JIT principles and moving on with different e-commerce solutions. This has had a positive impact on its working capital management. Dell's competitors are anxious to understand better the secrets of Dell's success and they have hired consultant Mary Hope to analyse the strengths and weaknesses of its working capital management and to present these results during a pre-arranged meeting. What would you like to say if you were in Mary Hope's shoes?

## APPENDIX 1. Dell's income statement

in mio USD

	Quarterly results				Annual results			
	Q1-12/13	Q2-12/13	Q3-12/13	Q4-12/13	2009/10	2010/11	2011/12	2012/13
<b>Income Statement:</b>								
<b>Net revenue</b>	<b>14,422</b>	<b>14,483</b>	<b>13,721</b>	<b>14,314</b>	<b>52,902</b>	<b>61,494</b>	<b>62,071</b>	<b>56,940</b>
<i>Sequential Growth</i>	-10%	0%	-5%	4%	-13%	16%	1%	-8%
<i>Y/Y Growth</i>	-4%	-8%	-11%	-11%				
Cost of revenue	11,355	11,345	10,849	11,205	43,641	50,098	48,260	44,754
<b>Gross margin</b>	<b>3,067</b>	<b>3,138</b>	<b>2,872</b>	<b>3,109</b>	<b>9,261</b>	<b>11,396</b>	<b>13,811</b>	<b>12,186</b>
SG&A	2,009	1,976	2,013	2,104	6,465	7,302	8,524	8,102
R&D	234	261	270	307	624	661	856	1,072
<b>Total operating expenses</b>	<b>2,243</b>	<b>2,237</b>	<b>2,283</b>	<b>2,411</b>	<b>7,089</b>	<b>7,963</b>	<b>9,380</b>	<b>9,174</b>
<b>Operating income</b>	<b>824</b>	<b>901</b>	<b>589</b>	<b>698</b>	<b>2,172</b>	<b>3,433</b>	<b>4,431</b>	<b>3,012</b>
Investment and other income, net	(32)	(63)	(38)	(38)	(148)	(83)	(191)	(171)
Income before taxes	792	838	551	660	2,024	3,350	4,240	2,841
Income tax provision	157	106	76	130	591	715	748	469
<b>Net income</b>	<b>635</b>	<b>732</b>	<b>475</b>	<b>530</b>	<b>1,433</b>	<b>2,635</b>	<b>3,492</b>	<b>2,372</b>
<i>Sequential Growth</i>	-17%	15%	-35%	12%				
<i>Y/Y Growth</i>	-33%	-18%	-47%	-31%	-42%	84%	33%	-32%
<b>EPS: in USD</b>								
Basic	<b>0.36</b>	<b>0.42</b>	<b>0.27</b>	<b>0.30</b>	<b>0.73</b>	<b>1.36</b>	<b>1.90</b>	<b>1.36</b>
Diluted	<b>0.36</b>	<b>0.42</b>	<b>0.27</b>	<b>0.30</b>	<b>0.73</b>	<b>1.35</b>	<b>1.88</b>	<b>1.35</b>
Cash dividends declared per common share	<b>0.00</b>	<b>0.00</b>	<b>0.08</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.16</b>
<b>Weighted Average Shares Outstanding:</b>								
Basic	1,759	1,747	1,735	1,738	1,954	1,944	1,838	1,745
Diluted	1,774	1,753	1,742	1,748	1,962	1,955	1,853	1,755
<b>Percentage of Net Revenue:</b>								
Gross margin	21.3%	21.6%	20.9%	21.7%	17.5%	18.5%	22.3%	21.4%
Selling, general and administrative	13.9%	13.6%	14.7%	14.7%	12.2%	11.9%	13.7%	14.2%
R&D and engineering	1.7%	1.8%	1.9%	2.1%	1.2%	1.0%	1.5%	1.9%
Total operating expenses	15.6%	15.4%	16.6%	16.8%	13.4%	12.9%	15.2%	16.1%
Operating income	5.7%	6.2%	4.3%	4.9%	4.1%	5.6%	7.1%	5.3%
Income before income taxes	5.5%	5.8%	4.0%	4.6%	3.8%	5.4%	6.8%	5.0%
Net income	4.4%	5.1%	3.5%	3.7%	2.7%	4.3%	5.6%	4.2%
Income tax rate	19.8%	12.7%	13.8%	19.7%	29.2%	21.3%	17.6%	16.5%
<b>Revenues by Business Unit:</b>	<b>14,422</b>	<b>14,483</b>	<b>13,721</b>	<b>14,314</b>	<b>52,902</b>	<b>61,494</b>	<b>62,071</b>	<b>56,940</b>
Global Large Enterprise	4,436	4,536	4,156	4,653	14,285	18,111	18,786	17,781
Global Public	3,466	4,065	3,824	3,473	14,484	16,377	16,070	14,828
Global Small and Medium Business	3,477	3,258	3,282	3,396	12,079	12,608	13,547	13,413
Global Consumer	3,043	2,624	2,459	2,792	12,054	14,398	13,668	10,918
<b>Operating income by Business Unit:</b>	<b>1,094</b>	<b>1,208</b>	<b>961</b>	<b>1,022</b>	<b>3,327</b>	<b>4,499</b>	<b>5,487</b>	<b>4,285</b>
Global Large Enterprise	402	433	325	393	819	1,490	1,889	1,553
Global Public	271	379	352	236	1,361	1,446	1,584	1,238
Global Small and Medium Business	389	382	349	385	1,040	1,383	1,581	1,505
Global Consumer	32	14	(65)	8	107	180	433	(11)
<b>Revenues by product:</b>	<b>14,422</b>	<b>14,483</b>	<b>13,721</b>	<b>14,314</b>	<b>52,902</b>	<b>61,494</b>	<b>62,071</b>	<b>56,940</b>
Servers and Networking	2,017	2,332	2,322	2,623	6,032	7,609	8,336	9,294
Storage	444	435	386	434	2,192	2,295	1,943	1,699
Services	2,071	2,106	2,107	2,112	5,622	7,673	8,322	8,396
Software & Peripherals	2,386	2,338	2,258	2,275	9,499	10,261	10,222	9,257
Mobility	4,236	3,870	3,523	3,674	16,610	18,971	19,104	15,303
Desktop PCs	3,268	3,402	3,125	3,196	12,947	14,685	14,144	12,991

Source: Dell's annual reports

**APPENDIX 2. Dell's balance sheet**

**in mio USD**

	<b>2012/13 Quarter-end results</b>				<b>Fiscal year-end results</b>			
	Q1-12/13	Q2-12/13	Q3-12/13	Q4-12/13	29-Jan-10	28-Jan-11	03-Feb-12	01-Feb-13
<b>Assets:</b>								
Cash & cash equivalents	12,814	11,519	10,991	12,569	10,635	13,913	13,852	12,569
Short-term investments	901	372	281	208	373	452	966	208
Accounts receivable, net	6,289	6,829	6,187	6,629	5,837	6,493	6,476	6,629
Short-term financing receivables, net	3,200	3,174	3,151	3,213	2,706	3,643	3,327	3,213
Inventories, net	1,472	1,615	1,364	1,382	1,051	1,301	1,404	1,382
Other	3,369	3,741	3,688	3,967	3,643	3,219	3,423	3,967
<b>Total current assets</b>	<b>28,045</b>	<b>27,250</b>	<b>25,662</b>	<b>27,968</b>	<b>24,245</b>	<b>29,021</b>	<b>29,448</b>	<b>27,968</b>
PP&E, net	2,119	2,058	2,156	2,126	2,181	1,953	2,124	2,126
Investments	3,501	2,738	2,908	2,565	781	704	3,404	2,565
Long-term financing receivable, net	1,342	1,344	1,354	1,349	332	799	1,372	1,349
Goodwill	6,005	7,558	9,191	9,304	4,074	4,365	5,838	9,304
Purchased intangible assets, net	1,801	2,609	3,511	3,374	1,694	1,495	1,857	3,374
Other non-current assets	476	540	664	854	345	262	490	854
<b>Total assets:</b>	<b>43,289</b>	<b>44,097</b>	<b>45,446</b>	<b>47,540</b>	<b>33,652</b>	<b>38,599</b>	<b>44,533</b>	<b>47,540</b>
<b>Liabilities &amp; Stockholders Equity:</b>								
Short-term borrowings	3,186	2,609	3,724	3,843	663	851	2,867	3,843
Accounts payable	10,970	11,193	10,556	11,579	11,373	11,293	11,656	11,579
Accrued and other	2,913	3,054	3,324	3,644	3,884	4,181	3,740	3,644
Short-term deferred revenue	3,745	3,856	4,207	4,373	3,040	3,158	3,738	4,373
<b>Total current liabilities</b>	<b>20,814</b>	<b>20,712</b>	<b>21,811</b>	<b>23,439</b>	<b>18,960</b>	<b>19,483</b>	<b>22,001</b>	<b>23,439</b>
Long-term debt	5,813	5,832	5,310	5,242	3,417	5,146	6,387	5,242
Long-term deferred revenue	3,855	3,915	3,963	3,971	3,029	3,518	3,855	3,971
Other non-current liabilities	3,450	3,892	4,164	4,187	2,605	2,686	3,373	4,187
<b>Total liabilities:</b>	<b>33,932</b>	<b>34,351</b>	<b>35,248</b>	<b>36,839</b>	<b>28,011</b>	<b>30,833</b>	<b>35,616</b>	<b>36,839</b>
Total Dell stockholder's equity	9,357	9,746	10,177	10,680	5,641	7,766	8,917	10,680
Noncontrolling interest	0	0	21	21	0	0	0	21
<b>Total stockholder's equity:</b>	<b>9,357</b>	<b>9,746</b>	<b>10,198</b>	<b>10,701</b>	<b>5,641</b>	<b>7,766</b>	<b>8,917</b>	<b>10,701</b>
<b>Total liabilities &amp; equity:</b>	<b>43,289</b>	<b>44,097</b>	<b>45,446</b>	<b>47,540</b>	<b>33,652</b>	<b>38,599</b>	<b>44,533</b>	<b>47,540</b>

Source: Dell's annual reports

**APPENDIX 3. Dell's cash flow statement**

<b>in mio USD</b>	<b>Quarterly results</b>				<b>Annual results</b>			
	Q1-12/13	Q2-12/13	Q3-12/13	Q4-12/13	2009/10	2010/11	2011/12	2012/13
<b>Cash flows from operating activities:</b>								
Net income:	635	732	475	530	1,433	2,635	3,492	2,372
Adjustments to reconcile net income to net cash provided by operating activities:								
Depreciation and amortization	248	281	294	321	852	970	936	1,144
Stock-based compensation	95	97	84	71	312	332	362	347
Effects of exchange rate changes on monetary assets and liabilities denominated in foreign currencies	(10)	25	-	3	59	(4)	(5)	18
Deferred income taxes	47	(95)	(59)	(321)	(52)	(45)	19	(428)
Provision for doubtful accounts - including financing receivables	63	58	64	73	429	382	234	258
Other	(5)	17	10	(3)	102	26	21	19
Changes in assets and liabilities, net of effects from acquisitions:								
Accounts receivable	161	(633)	766	(444)	(660)	(707)	(53)	(150)
Financing receivables	71	(60)	(62)	(142)	(1,085)	(709)	(372)	(193)
Inventories	(68)	(122)	257	(19)	(183)	(248)	(52)	48
Other assets	48	(244)	(138)	-	(225)	516	(28)	(334)
Accounts payable	(671)	231	(664)	1,030	2,833	(151)	327	(74)
Deferred revenue	1	121	68	192	135	551	720	382
Accrued and other liabilities	(753)	229	248	150	(44)	421	(74)	(126)
<b>Change in cash from operating activities:</b>	<b>(138)</b>	<b>637</b>	<b>1,343</b>	<b>1,441</b>	<b>3,906</b>	<b>3,969</b>	<b>5,527</b>	<b>3,283</b>
<b>Cash flows from investing activities:</b>								
Investments:								
Purchases	(673)	(517)	(641)	(784)	(1,383)	(1,360)	(4,656)	(2,615)
Maturities and sales	640	1,800	716	1,198	1,538	1,358	1,435	4,354
Capital expenditures	(142)	(120)	(121)	(130)	(367)	(444)	(675)	(513)
Proceeds from sale of facilities, land, and other assets	-	34	47	54	16	18	14	135
Purchase of financing receivables	-	-	-	-	-	(430)	-	-
Collections on purchased financing receivables	55	47	34	31	-	69	278	167
Acquisition of business, net of cash received	(245)	(2,166)	(2,297)	(136)	(3,613)	(376)	(2,562)	(4,844)
<b>Change in cash from investing activities:</b>	<b>(365)</b>	<b>(922)</b>	<b>(2,262)</b>	<b>233</b>	<b>(3,809)</b>	<b>(1,165)</b>	<b>(6,166)</b>	<b>(3,316)</b>
<b>Cash flows from financing activities:</b>								
Repurchase of common stock	(324)	(400)	-	-	-	(800)	(2,717)	(724)
Cash dividends paid	-	-	(139)	(139)	-	-	-	(278)
Issuance of common stock under employee plans	38	6	5	3	2	12	40	52
Issuance (repayment) of commercial paper (maturity of 90 days or less), net	13	125	(430)	(39)	76	(176)	635	(331)
Proceeds from debt	596	555	1,639	521	2,058	3,069	4,050	3,311
Repayments of debt	(863)	(1,241)	(718)	(426)	(122)	(1,630)	(1,435)	(3,248)
Other	8	-	-	-	(2)	2	4	8
<b>Change in cash from financing activities:</b>	<b>(532)</b>	<b>(955)</b>	<b>357</b>	<b>(80)</b>	<b>2,012</b>	<b>477</b>	<b>577</b>	<b>(1,210)</b>
Effect of exchange rate changes on cash and cash equivalents	(3)	(55)	34	(16)	174	(3)	1	(40)
<b>Change in cash and cash equivalents:</b>	<b>(1,038)</b>	<b>(1,295)</b>	<b>(528)</b>	<b>1,578</b>	<b>2,283</b>	<b>3,278</b>	<b>(61)</b>	<b>(1,283)</b>
Cash and cash equivalents at beginning of period:	13,852	12,814	11,519	10,991	8,352	10,635	13,913	13,852
<b>Cash and cash equivalents at end of period:</b>	<b>12,814</b>	<b>11,519</b>	<b>10,991</b>	<b>12,569</b>	<b>10,635</b>	<b>13,913</b>	<b>13,852</b>	<b>12,569</b>

Source: Dell's annual reports

Author: Laivi Laidroo

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**APPENDIX 4. Dell's market share**

	Current Rank	Current Year Share					Annual Share									
		Q4 2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>WW Client PCs</b>	<b>3</b>	<b>13%</b>	<b>11%</b>	<b>11%</b>	<b>11%</b>	<b>11%</b>	<b>16%</b>	<b>17%</b>	<b>18%</b>	<b>16%</b>	<b>14%</b>	<b>14%</b>	<b>13%</b>	<b>13%</b>	<b>13%</b>	<b>11%</b>
USA	2	22%	22%	23%	21%	20%	32%	35%	36%	33%	29%	29%	24%	23%	22%	21%
EMEA	5	11%	10%	9%	8%	9%	10%	11%	12%	12%	11%	11%	9%	10%	11%	9%
Asia Pacific	4	10%	9%	9%	9%	8%	6%	6%	7%	7%	7%	9%	8%	10%	10%	9%
Japan	5	9%	8%	8%	8%	9%	9%	11%	12%	14%	14%	14%	12%	10%	9%	8%
Desktop PC	3	14%	12%	13%	12%	13%	17%	18%	17%	16%	15%	15%	13%	14%	14%	12%
Portable PC	5	12%	11%	10%	10%	9%	16%	17%	18%	17%	14%	14%	12%	12%	12%	10%
x86**	2	27%	26%	28%	27%	26%	25%	25%	26%	26%	25%	27%	27%	28%	26%	27%
Consumer	5	9%	8%	7%	7%	7%	12%	13%	12%	11%	8%	9%	9%	9%	9%	7%
SMB <sup>1</sup>	3	14%	12%	12%	12%	12%	13%	14%	15%	14%	14%	14%	12%	13%	13%	12%
Public	3	17%	15%	17%	14%	15%	15%	17%	21%	17%	19%	20%	21%	18%	17%	15%
Large Enterprise <sup>2</sup>	3	28%	23%	26%	25%	23%	30%	31%	32%	25%	29%	31%	32%	29%	27%	24%

\*PC's include Desktops, Notebooks, data as of January 2013

\*\*x86 is preliminary Q3 IDC data

<sup>1</sup>SMB includes companies with less than 500 employees

<sup>2</sup>Large Enterprise includes companies more than 500 employees

Source: Dell's annual report

**APPENDIX 5. Financial indicators of Hewlett Packard and Lenovo**

	<b>Hewlett Packard</b>				<b>Lenovo</b>			
	Financial year ends in Oct				Financial year ends in March 31			
	2008/09	2009/10	2010/11	2011/12	2008/09	2009/10	2010/11	2011/12
Net Sales mio USD	114,175	125,615	126,796	119,895	14,901	16,605	21,594	29,574
Total assets mio USD	114,799	124,503	129,517	108,766	6,622	8,956	10,706	15,861
Total non-current assets mio USD	62,260	70,319	78,496	58,129	2,521	2,720	2,769	4,040
Total equity mio USD	40,517	40,449	38,625	22,436	1,311	1,606	1,835	2,448
Total long-term debt + spont. financing mio USD	72,432	77,008	82,809	79,685	5,233	7,180	8,461	13,173
Total short-term debt mio USD	1,850	7,046	8,083	6,647	78	170	410	240
EPS (USD per share)	3.2	3.8	3.4	-6.4	0.03	0.01	0.03	0.05
<b>Liquidity:</b>								
<b>Current ratio</b>	<b>1.22</b>	<b>1.10</b>	<b>1.01</b>	<b>1.09</b>	<b>0.92</b>	<b>0.97</b>	<b>0.99</b>	<b>1.00</b>
<b>Quick ratio</b>	<b>1.08</b>	<b>0.97</b>	<b>0.86</b>	<b>0.95</b>	<b>0.82</b>	<b>0.83</b>	<b>0.89</b>	<b>0.90</b>
<b>Cash conversion cycle</b>	<b>47.7</b>	<b>44.6</b>	<b>48.9</b>	<b>50.4</b>	N/A	<b>-25.6</b>	<b>-14.1</b>	<b>-6.3</b>
Days supply in inventory	28.8	23.7	25.8	26.9	N/A	16.2	15.7	13.9
Days of sales outstanding	80.0	75.8	76.9	78.3	N/A	16.3	19.9	22.7
Days in accounts payable	61.2	54.8	53.8	54.7	N/A	58.0	49.8	42.9
<b>Net working capital (mio \$)</b>	<b>9,536</b>	<b>4,781</b>	<b>579</b>	<b>3,971</b>	<b>-1,946</b>	<b>-3,699</b>	<b>-5,263</b>	<b>-7,769</b>
<b>Net working capital to sales</b>	<b>8.4%</b>	<b>3.8%</b>	<b>0.5%</b>	<b>3.3%</b>	<b>-13.1%</b>	<b>-22.3%</b>	<b>-24.4%</b>	<b>-26.3%</b>
<b>Profitability:</b>								
<b>Gross margin</b>	<b>23.4%</b>	<b>23.7%</b>	<b>23.2%</b>	<b>22.9%</b>	<b>12.1%</b>	<b>10.8%</b>	<b>10.9%</b>	<b>11.7%</b>
<b>Operating margin</b>	<b>8.9%</b>	<b>9.1%</b>	<b>7.6%</b>	<b>-9.2%</b>	<b>-1.3%</b>	<b>1.3%</b>	<b>1.8%</b>	<b>2.0%</b>
<b>ROA</b>	<b>6.7%</b>	<b>7.3%</b>	<b>5.6%</b>	<b>-10.6%</b>	<b>N/A</b>	<b>1.7%</b>	<b>2.8%</b>	<b>3.6%</b>
<b>ROE</b>	<b>19.3%</b>	<b>21.6%</b>	<b>17.9%</b>	<b>-41.4%</b>	<b>N/A</b>	<b>8.9%</b>	<b>15.9%</b>	<b>22.2%</b>
<b>Solvency:</b>								
<b>Equity ratio</b>	<b>0.34</b>	<b>0.35</b>	<b>0.32</b>	<b>0.30</b>	<b>0.20</b>	<b>0.18</b>	<b>0.17</b>	<b>0.15</b>
<b>Debt to equity ratio</b>	<b>0.46</b>	<b>0.39</b>	<b>0.55</b>	<b>0.79</b>	<b>0.69</b>	<b>0.68</b>	<b>0.66</b>	<b>0.73</b>
<b>Debt to assets</b>	<b>0.16</b>	<b>0.14</b>	<b>0.18</b>	<b>0.24</b>	<b>0.14</b>	<b>0.12</b>	<b>0.11</b>	<b>0.11</b>

Source: Annual reports of Hewlett Packard and Lenovo

Author: Laivi Laidroo

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**APPENDIX 6. Financial indicators of Dell**

	Prior Quarter Results				Annual results			
	Q1-12/13	Q2-12/13	Q3-12/13	Q4-12/13	2009/10	2010/11	2011/12	2012/13
Net Sales mio USD								
Total assets mio USD								
Total non-current assets mio USD								
Total equity mio USD								
Total long-term debt + spont. financing mio USD								
Total short-term debt mio USD								
<b>Liquidity:</b>								
<b>Current ratio</b>								
<b>Quick ratio</b>								
<b>Cash conversion cycle</b>								
Days supply in inventory								
Days of sales outstanding								
Days in accounts payable								
<b>Net working capital (mio \$)</b>								
<b>Net working capital to sales</b>								
<b>Profitability:</b>								
<b>Gross margin</b>								
<b>Operating margin</b>								
<b>ROA</b>								
<b>ROE</b>								
<b>Solvency:</b>								
<b>Equity ratio</b>								
<b>Debt to equity ratio</b>								
<b>Debt to assets</b>								