

*St. John's University Undergraduate
Student Managed Investment Fund
Presents:*

**Dell Computer Corporation
Stock Analysis**



April 15, 2003

Recommendation: Purchase 350 shares of Dell stock at market order

Industry: Computer Hardware

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Share Data

Price – \$28.01

Date – April 9, 2003

Target Price – \$37.80

52-Week Price Range – \$21.90 - \$31.06

Market Capitalization – 73.17 billion

Shares Outstanding – 2.579 billion

Revenue 2002 – \$35,404

Projected EPS Growth – 30%

ROE '02 – 44.36

Fundamentals

P/E '02 – 35x

P/E '03E – 30x

Dividend Yield – N/A

Earnings Per Share Projection

EPS 2003E = \$1.04



Executive Summary

After analyzing Dell's financials and the industry, we have come to the conclusion that as a class should purchase 350 shares of Dell stock at market order. The company strives to be number one in the computer industry and has tried to position themselves to be a leader in the market through cost savings, excellent customer service, innovative technology, strong management, and determination. We believe that the first quarter results are a good indicator of solid future performance.

Company Overview

Dell is the world's #1 direct-sale computer vendor. Dell offers a full line of desktop and notebook PCs designed for consumers, network servers, workstations, storage systems, and Ethernet switches for enterprise customers. They sell handheld computers, and market third-party software and peripherals. Dell also provides unit systems integration, support, and training for customers. In 2002 Dell became the number one worldwide personal computer systems company. Michael Dell started the company in 1984 with the idea to sell custom built computers directly to customers. Dell believes that their commitments to customer value, to their team, to being direct, to operating responsibly and, ultimately, to winning continue to differentiate themselves from other companies in the industry. Their customers encompass a large area, for example they sell to corporations, individuals, schools, smaller businesses and others.

Dell Computer Corporation is a premier provider of products and services required for customers worldwide to build their information-technology and Internet infrastructures. They are traded on the NASDAQ exchange and at this point in time do not pay out dividends.

Their successful revenue trend can be greatly attributed to the emphasis they place on the focus of their customers. They work hard to meet the needs of each customer with carefully tailored solutions based on industry-standard technology. They interact with their customers in person, via the Internet or by phone. By doing this they believe it allows them to effectively as well as efficiently deliver world-class products and services that draw their customers back again and again. They say that their commitment is bring value to customers and adding value to their company, neighborhoods, communities and their world through diversity, environmental and global citizenship initiatives.

Dell is headquartered in Austin, Texas and has manufacturing facilities and sales offices throughout North America, Europe, Asia Pacific, Japan and South America.

Dell has become more aggressive in their pricing strategies in attempt to increase their share in the consumer market. The company also benefits from the fact that it can pass lower component costs to customers faster than other companies are able to. As a result they can lead their competition in price cuts to gain market share of the computer industry.

The following chart shows Dell's revenue dispersion in millions for the year ended February 2002:

Net Revenue	Amount \$	% Change
America		01 - '02
Business	17,275	-9%
US Consumer	4,485	15%
Total America	21,760	-5%
Europe	6,429	N/A
Asia Pacific-Japan	2,979	14%
Consolidated Net Revenue	31,168	-2%

The following chart breaks down the amount of each type of system Dell has sold over the past three years. For each of these three years no single customer has accounted for more than 10% of Dell's consolidated revenue. The figures are in millions.

Product Breakdown			
In millions	Feb-02	Feb-01	Jan-00
Desktop Systems	16,516	16,874	14,911
Notebook Systems	8,829	9,237	6,312
Enterprise Systems	5,823	5,777	4,042
Total	31,168	31,888	25,265

Recent News

Dell has decided to expand consumer recycling starting March 25th. Customers will now have the option for home pick up of their unwanted computer equipment. In order to raise awareness of Earth Day and collect 100 tons of used computer equipment to donate or recycle. This program is being run through Dell Recycle. It will cost continental US customers \$15 per unit to have someone come to their home and remove items. In attempt to raise awareness and encourage consumers to take advantage of Dell reuse and recycling programs. They launched a Recycling Tour on Saturday, March 29 in Nashville, Tenn. and then moved to Columbus, Ohio, April 5; Charlotte, N.C., April 12; Portland, Oregon, April 19; Austin, Texas, Earth Day April 22

and April 27. Customers will be able to just bring their unwanted hardware and drop it off with Dell.

On March 12th, 2003 Dell introduced its next generation thin and light notebook, the Inspiron™ 600m. This notebook is designed for small businesses and consumers who need mobility and connectivity but still require great performance. The new item includes Intel® Centrino™ Mobile Technology, which is built specifically for mobile computing with integrated Intel PRO/Wireless network connection 802.11b capability. This enables a much longer battery life.

According to an article on CNET, Dell launched into the printer business, a business they currently aren't involved in. At the end of March Dell introduced 3 printers, 2 laser and 1 multifunction printer. Dell is hoping to both boost their sales as well as hurt Hewlett Packard printer sales. Their prices will either match or beat Hewlett Packard's prices. They believe that their venture will work well considering other ventures of theirs have succeeded. Analysts seem to have mixed feelings about Dell's success in the printer business.

Dell has recently decided to turn to making computer systems that are based on standardized technology, such as their personal computers and computer servers, according to a Reuters article on April 2, 2003. They believe that this decision will help the company especially in this time of economic fluctuation. It is believed that even if the decline in hardware revenues continue Dell will still be able to benefit from a trend of growing computing capacity. Dell will also work with Oracle in attempt to better the company.

April 2, 2003 Dell reaffirmed their outlook for 1st quarter revenue increases of 18% due to the fact that demand has remained strong. They have seen double-digit year-over-year revenue growth, which is a great change from last year. Dell has been able to fare better than other companies due to its low-cost production and distribution, high-volume, and low prices. An analyst from Bear Stearns pointed out that for the past eight quarters Dell has at least met if not exceeded their projections. This quarter volumes are up 25% compared to last year and earnings per share for this quarter are expected to be \$0.23 and revenue at \$9.5 billion and increase from last year's first quarter results of \$0.17 EPS and \$8.07 billion in revenue.

Industry Analysis

Industry Overview

The computer hardware industry was hit hard in 2002. The great results seen in the 1990's are a tough act to follow. Also the events of September 11th, 2001 took a great toll on the industry as it did to the economy as a whole.

In 2002 worldwide unit shipments for the second quarter declined 0.5%, from second quarter 2001 results. This was the fourth consecutive quarter with negative year-to-year comparisons for the computer hardware industry. The global unit shipment figure was 31.082 million units. The low figures in shipments could be attributed to the Hewlett-Packard Co. (H-P) and Compaq merger of May 2002. Hewlett Packard was the market leader, with a 15.1% share, but its unit

shipments were down 16.2%. Dell Computer Corp. constituted 14.8% share, and its shipments grew 15.5% worldwide. International Business Machines Corp. (IBM) followed with 6.3% of the market for second quarter 2002. U.S. PC shipments for the second quarter of 2002 grew to 1.8% from the previous year but shipments to area such as Europe, the Middle East, and Africa declined by 2.2%. Considering growth in the second quarter of 2002 wasn't as much as anticipated hopes of fall and winter sales were being counted on a lot. Even so a large amount of growth wasn't anticipated until this year.

The consolidation move of HP and Compaq did affect the market a lot. The decline in HP's shipments can be attributed to the confusion and uncertainty from customers due to the acquisition, which was believed to affect their sales. During the merger Dell made strategic moves by lowering their prices to gain market share. It is believed that the industry will continue to see effects of the merger in the future.

Low PC sales date back to 2001 where unit sales of PCs decreased by an estimated 4.0% this decrease generally reflected the global economic slowdown. The growth of our country's GDP was reduced to 0.3% in 2001 from 4.1% in 2000 a dramatic decrease. This intern meant that people had less money to spend and less PC's were purchased. From 1997–2000 there was a huge increase in PC investments. Shipments rose by 16% in 2000, 24% in 1999, 13% in 1998, and 16% in 1997. Their enterprise systems (servers, storage & networking products, and workstations) grew in shipments by 26% and a 44% revenue increase from 2000 to 2002 These numbers were fairly high and became difficult to compete with.

In the second quarter of 2002, Dell dropped to the second spot in the worldwide market, with a 14.8% share, closely following HP. They reported 15.5% unit growth for the quarter, which outperformed the overall market decline of 0.5%.

Even though sales in 2002 we not great, sales for 2003 are anticipated to be much better due to a few beliefs. First it is believed that many people that worried about Y2K purchase new computers and now it is three plus years later and time for upgraded systems, intern they will invest in new computers. Also our economic recover is anticipated to begin in 2003. Standard & Poor's has estimated real GDP for 2003 at 3.4%. Investment in information technology and new PC's is anticipated. The demand for PC's definitely follows the market movement so if there is not an upturn soon this will continue to have effects on the industry.

Along with making and selling PC's Dell is involved in Internet World. The Internet World is comprised of many different parts such as networking hardware, which includes routers, access equipment, and servers. In 2002 the leader in vendors was HP-Compaq with 30% market share followed by Dell with 19.2% of the market share. In the third quarter alone Dell was number one with 26.3% of the market share followed by HP-Compaq with 25.9%.

The Internet is used for various different services such as chatting, browsing, emailing, shopping, etc... A very profitable part of the Internet is business-to-business e-commerce (B2B). In 2001 the market was anticipated to generate \$474.3 billion and in 2004 it is anticipated to grow to \$2.4 trillion! Cisco Systems and Dell Computer Corp. are two big companies in this category. Daily

sales for Cisco amount to approximately \$43 million in online sales, as of October 2002. And some of Dell's sales amount to \$41 million to \$51 million daily.

Life Cycle of PC Industry

The computer industry, specifically the PC hardware sector, is now at the maturity stage, this means that all the consumers who want computers have had their share of computers. Market Maturity occurs when industry sales level off. Competition gets tougher as aggressive competitors entered for profits. Industry profits continue to go down during maturity because promotion costs rise and competitors continue to cut prices to attract more business. Now customers want convenience and value for their money. At this phase, the products have to meet consumer's need. The consumers in this stage do not need technical expertise. Mass distribution and total market coverage usually characterizes a product in maturity. Competition shifts to customer services, production, and distribution efficiency. Dell has an advantage in this area because they are a direct seller of PCs. This allowed them to have a better grasp of current demand trends and control their inventory levels.

Market Trends

The PC industry has gone through numerous changes in its competitive environment since its inception in the mid-1970s. In 1995, Dell Computer held less than 4 percent of the worldwide PC market. Now Dell is the number one PC vendor worldwide, with 13 percent of the global market, and holds nearly 25 percent of the US market.

Today the PC industry is struggling with revenues declining and profits disappearing. The most dramatic evidence of major changes taking place in the industry is consolidation. The largest merger in this industry as of yet was the May 2002 merger of Compaq and Hewlett Packard. This deal was valued at around \$19 billion. Acquisition strategies allow companies to broaden their customer base and offer a wide variety of products and services to their customers. Some of the other key industry trends that affect the companies include:

Market and Distribution Trends

Competitive advantage in the PC industry today is driven more by sales, distribution and customer relationships than by manufacturing or product innovation. Dell's direct sales model has proven to have inherent advantages over the indirect channel, including cash management, rapid inventory turnover, and stronger customer loyalty. Dell utilizes national advertising campaigns on television, print advertising in magazines, and sale sites on the World Wide Web. In addition to those means, Dell also sends mailing to consumers and uses a direct sales force for corporate accounts. With this type of low cost strategy, Dell has gained the market share benefits. The direct sales method has become possible because consumers are becoming more computer literate and are more comfortable with making purchases over the phone and the Internet. Other PC makers have tried to implement their own direct sales models, but have faced serious problems with channel conflict, as well as with making the internal changes necessary for such a shift.

New product and Technology Directions

In the past five years, mobile IT products have gained an average of 1.75% annually as a share of total end computing devices sold. With the arrival of 3G mobile communications services and wireless networking standards such as Bluetooth, the shift toward mobility in data communications and computing is likely to continue. This change means there will be new opportunities for growth and for innovation on the part of PC makers. It also may change the competitive landscape because firms in the PDA and wireless industries may begin to compete with PC makers.

Internet Boost IT Investments

Demand for PCs should continue to grow as the number of users seeking to access the Internet grows. The growth forecast for Internet usage should stimulate investments in computer hardware. The growth can come from many areas. Businesses can gain a competitive advantage by providing their customers better service and support through their websites. They can also link to their suppliers through the Internet, allowing for faster transactions and delivery. Individual countries can benefit when they invest in the Internet infrastructure to become more globally competitive and improve standards of living for its people. Consumers will continue to use the Internet for a variety of communication, commerce, and educational purposes.

PC Home Entertainment Center

Computers are rapidly becoming the center of home entertainment and information. A well-equipped PC now functions as a CD player for music, a DVD player for movies, a video game machine, a storage and viewing device for family photos, an e-mail enabler, a voice mail/fax machine, and a gateway to the Internet. This trend is likely to continue, as consumers prefer the “all in one” mentality. Consumers want one machine that can do they job of many to reduce cost of buying them separately and reduce the space to store them.

Some sector of the computer industry experiencing mature growth rates but the industry’s overall outlook remains healthy. There is pressure on the growth rates of computer hardware because nowadays, greater computing power is available at lower prices.

Factors Affecting the Industry’s Performance

There are a variety of factors that can affect the operation of a computer hardware company. The factors that will have an effect on future operations includes:

General Economic and Industry Conditions

Any circumstances that would cause consumers to delay or decrease purchases of computers will have an adverse affect on the financial status of the companies in the PC industry. Take Dell for example, during the fiscal year 2002, worldwide economic conditions negatively affected demand for the Dell’s products. This resulted in declining revenue and earnings for the company

as compared to their previous year. In addition, political factors can affect companies as well. For example, acts of terrorism in the United States or abroad could cause disruption to the companies, its suppliers, distributors or customers. This could result in a material adverse effect on business.

Competition

There is aggressive competition in all areas of the PC business. The computer hardware industry competes on many factors: price, technology availability, performance, quality, reliability, service and support. Any company that can outperform its competitors in each of these factors will gain competitive advantage. With Dell, they believe that their cost structure and direct business model gives them a competitive advantage over their competitors. However, Dell is unsure of the future. If their competitors start adopting similar cost structures and business model, Dell will lose their competitive advantage.

Seasonal Trends

All computer manufacturers experience seasonal trends in the sale of its products. For example, sales to governments are often stronger in the Dell's third quarter, European sales are often weaker in the third quarter and consumer sales are often stronger in the fourth quarter. Consumer sales are stronger in the fourth quarter because manufacturers focus on back to school selling and holiday purchases. In the past, the net result of seasonal trends has not been material relative to the overall results of operations. However, we should realize that many of the factors that affect seasonal trends are beyond the company's control.

Inventory Management and Supplies

In recent years, the main challenge for computer hardware firms has been to satisfy the marketplace's insatiable demand for their products. The problem occurs when a company tries to meet market demand and there is a sudden change in technology or consumer preference, causing them to hold devalued inventory. Sustaining a low inventory level by accurate forecasting of demands will decrease this risk. Dell for example uses a direct business model, giving them the ability to operate with reduced levels of component and finished goods inventories. Their recent financial success has been partly due to its JIT inventory practices. However, a temporary disruption in component availability can unfavorably affect their short-term performance. In recent years, the supply condition has been favorable to the industry. However, less favorable supply conditions may result in increased inventory levels in the future.

Dell's manufacturing process requires a high volume of quality components that are procured from third party suppliers. Reliance on suppliers generally involves several risks, including the possibility of defective parts, shortages, reduced control over delivery schedules, and increases in component costs. Dell has several single-sourced supplier relationships. Relying on a single source for components is risky. If these sources are unable to provide timely and reliable supply, they could experience manufacturing interruptions, delays or inefficiencies, adversely affecting its results of operations.

International Activities

As the U.S. market matures, PC manufacturers are looking abroad to search for faster growth rates. Thus, PC makers must now compete not only domestically but also internationally. Areas such as Asia Pacific region and Latin America are expected to continue outpacing the US in growth rate during coming years because the US market is already saturated. However, the success and profitability of international operations are subject to a number of risks and uncertainties such as local economic and labor conditions, political instability, unexpected changes in the regulatory environment, trade protection measures, tax laws and foreign currency exchange rates. These factors may all affect the material status of the company. For the fiscal year 2002, 35% of Dell's revenue came from sales outside the United States. Dell's future growth rates and success depends on the continued growth and success in international markets.

Product, Customer, and Geographic Mix

The profit margins realized by PC manufacturers vary to some extent among its products, customers and geographic markets. Therefore, the material status of their operations is partly dependent on the product, customer and geographic mix reflected in that period's revenues. Any changes in these factors will change their profit margin.

Technological Changes and Product Transition

The technology industry is characterized by continuing improvements in technology. This results in the frequent introduction of new products, short product life cycles, and the continual improvement in product price/performance characteristics. The greatest executional challenges and risks any computer company may have are product transitions. A failure on the part of the company to effectively manage a product transition will directly affect the demand for their products and the profitability.

Patent Rights

The success of a PC manufacturer partly depends on their ability to obtain licenses on products and technology developed by others on reasonable and competitive terms. If the company or its suppliers are unable to obtain desirable technology licenses, they could be forced to market products without desirable features or could acquire large costs to redesign its products or defend legal actions.

Consumer Confidence

Positive consumer confidence comes from the fact that more than half of the US population owns a PC at home. Thus, demand for computers is on the rise. Recent news can have a great impact on consumer confidence. Consumer confidence fell greatly from September (93.7) to October (79.4). This sharp decline is contributed by many factors such as: decline in financial markets, less consumer spending, weak labor market, and threat of action against Iraq.

Real growth in gross domestic product (GDP): is a measure of the market value of all goods and services produced in the United States. Information technology spending in the United States has increased greatly. In 1985, IT spending accounted for about 4.2% of the GDP. In year 2000, the amount of GDP spending had increased to 8.3% of the total share of output. This put the IT industry in third place. GDP growth levels forecasted by S&P 500 are 2.5% for year 2002 and 3.4% for 2003.

Currency Exchange Rates

Thinking of the computer industry on the international level can make quite the difference in terms of profit and sales. However, another issue to be taken into consideration is currency exchange rates. Many companies such as Dell, HP and IBM generate many sales on the international level. The value of the dollar relatively compared to that of other currencies can have quite the impact on the overall industry. Changes in the value of the dollar and say for example the yen can have negative and positive impact for the company/companies on expenses, sales and profit. One way to secure their position against the yen is to hedge against the risk posed by operating internationally.

HOW TO ANALYZE A COMPUTER HARDWARE COMPANY:

There are many ways to go about analyzing a company in any industry by studying the following items in depth:

1. Financial statement analysis: basically gives you an idea of the future prospects of the company. This however only considers the quantitative part of the analysis. The qualitative part is equally critical to the analysis process. The qualitative process explains the technology, competition, marketing strategies and credibility of the specific company.
2. Change in the industry: how well can a company encounter and manage a change...how good is the company at battling a change. This action determines whether the company is an industry leader. Companies like IBM are in a negative position and proof is shown on its financial statements. The market produced more cheaper and functional products which impacted IBM in a negative way along with companies like Apple Computer.
3. Service capabilities are equally important especially now that consumers are demanding it. They want for computer companies to act as consultants. If companies such as IBM consider this strategy it may improve its competitive status compared to Dell.
4. Since product differentiation does not really apply to the computer industry, factors such as price, quality, reliability, and the level of service and support can be factors that companies in this industry can look into to improve their competitive status.
5. Financial status compared to its competitor.
6. Growth rates in the segment in which a company specializes in producing products such as mainframe computers, pc etc.
7. When analyzing the financial statements, look at the income statement: sales trends, gross profit margin (affected by sales volume, pricing, sales mix), expenses, operating margins,

net profit margins. Balance sheet – long term debt to capital ratio, current ratio, inventories, and account receivables.

Valuation methods: ROA and ROE, P/E, Price to Sales, Price/Cash flow

Analysis of Competitive Forces

Rivalry

The PC industry is facing intense competition. No company can allow a competitor initiate a price reduction without responding quickly. There is also focus of differentiation of quality and service. The quality of a company's service and support has grown in importance. It has become increasingly important for computer companies to meet the service requirements of their customers. As they differentiate themselves with service and product, they must also promote their brand names to potential customers. Dell, for example, has successfully used national television ad campaigns to promote their products.

Threat of New Entrants

New entrants to an industry put pressure on prices and profits. Barriers to entry are they key to determining an industry's profitability. The barriers to entry that affect the PC industry includes:

1. *Capital Requirement:* the cost of becoming established in the industry. The computer industry has a high capital requirement for entering the industry because the parts needed are costly.
2. *Economies of Scale:* high volume is necessary to be efficient. In order to make a profit, the demand for a specific product must be high enough to justify its production.
3. *Distribution Channel:* Distribution channels typically have limited capacity, existing companies will receive preferences as they generally have less associated risk. PC manufacturers now use a variety of sales channels to bring the products to market: retail outlets, traditional distribution approach, and direct sales approach. For example, Dell's built to order strategy allows them to carry relatively low levels of inventory. If the cost of raw material declines, Dell can either keep the savings or pass them along to consumers. In addition, since they keep such low inventories, their PC's reflect the latest technology offering there is.

Threat of Substitute Products

Substitute products means that the industry can face competition from firms in related industries. Although there are substitutes for computers such as setup box on televisions, PDAs, terminals, and typewriters, the replacements of PC cannot perform what a PC does. Once the consumers are adapted to PCs they are unlikely to switch. Thus, the substitute market for PC is too small to have a significant impact on the industry.

Bargaining Power of Suppliers

If a supplier of a key input has monopolistic control over the product, it can demand higher prices for the goods. Manufacturing PC requires a large volume of components, all which must be of high quality and compatibility. Most computer components are standardized and are available from many sources. However, manufacturers usually rely on one or two suppliers for two key components, the motherboard and CPU.

The CPU is usually acquired from a single supplier: Intel. More than 80% of the world's PC's include an Intel processor. Depending on a single supplier for a critical component is risky to the business. Intel has also increasingly supplying companies with motherboards as well.

Bargaining Power of Buyers

The bargaining power of buyers determines how much a buyer can affect the price of computers. If a single buyer purchases a large portion of the industry's output, it will have substantial bargaining power and can demand price concessions. With Dell, no single customer accounted for more than 10% of the company's consolidated net revenue during fiscal 2002, 2001, and 2000.

Analysis of Strategies

Dell employs a global strategy to be the premier provider of products and services, including those that customers require to build their information-technology and Internet infrastructures. Their goals are high and they have done a good job so far at achieving them for the most part.

In order to achieve their mission of Global Diversity Dells says that they will:

- Influence thinking and behaviors "at all levels".
- Foster a winning culture that enables all employees to perform at his or her best and that motivates employees to win with integrity in the global marketplace.
- Promote a barrier-free workplace where individuals take responsibility for addressing personal and organizational biases that inhibit successful pursuit of teamwork and business goals.
- Partner with multicultural organizations to support access to technology, talent, business and education in our communities.

Along with their global strategy Dell employs a business strategy based on the direct model approach. This approach attempts to deliver superior customer service through the use of direct, comprehensive customer relationships, cooperative research and development, computers built to customers wants and service and support for all customers needs.

Dell believes that by using the direct model approach they will have great advantages over their competitors. This approach allows Dell to avoid dealer mark-ups as well as high inventory costs. Dell uses the just-in-time inventory method of operations management, which keeps inventory

costs low because less inventory is kept on hand. This reduces Dell's expenses and allows them to not run into problems with holding onto obsolete computer parts since technology changes so quickly. The direct model approach also helps Dell to know what their customers will want in the future. It allows them to understand their customers needs before, during and after they have made a purchase.

Thanks to the direct model approach Dell has had very successful relationships with technological companies, great overall success, and much faster inventory turnovers compared to their competitors, as you will see later in the ratio comparisons thanks to their custom built systems.

The "Direct Model" starts and ends with their customers, making their experience revolutionary. There are five principals in this model and they include:

1. *Using the most efficient path to customers.* Dell believes that the most efficient path to the customer is through a direct relationship, with no intermediaries to add confusion and cost. Dell is organized around groups of customers with similar needs. This allows them to understand the specific needs of specific customers, without customer needs being "translated" by inefficient resellers and middlemen.
2. *Single Point of Accountability.* Dell recognizes that technology can be complex, so they try to keep things easy for our customers. Dell makes the single point of accountability so that resources necessary to meet customer needs can be easily assembled in support of complex challenges. Customers want streamlined and fast access to the right resources; and their "Direct Model" provides just that.
3. *Build-to-Order.* Dell provides customers exactly what they want in their computer systems through easy custom configuration and ordering. With build-to-order, they do not maintain months of aging and expensive inventory. As a result, they usually provide customers with the best pricing and latest technology for features they really want.
4. *Low-Cost Leader.* Dell focus resources on what matters to customers. Dell consistently provide customers with superior value with a highly efficient supply chain and manufacturing organization, a concentration on standards-based technology developed collaboratively with industry partners, and a dedication to reducing costs through business process improvements.
5. *Standards-Based Technology.* Dell believes that standard technology is key to providing customers with relevant, high-value products and services. Focusing on standards gives customers the benefit of extensive research and development from Dell and an entire industry. Unlike proprietary technologies, standard based technology give customers flexibility and choice.

Management

Management is very important to a company's success. Without the right people in control a company can run into various different problems and issues. Dell's CEO and Chairman of the board is Michael S. Dell. He has held this position since 1984 when the company was founded. He is involved in various councils and committees along with having been named CEO of the year for 2001 in Chief Executives Magazine. At the age of 37 he is the youngest member of Dell's management team. Michael Dell has instilled a unique environment at Dell known as the "Soul of Dell". The core components of this environment include: The creation of loyal customers through a superior experience at a great value, teamwork and the opportunity to learn, develop and grow, being direct in all aspects, participating responsibly in the global marketplace, and last but not least the passion to win in all they do.

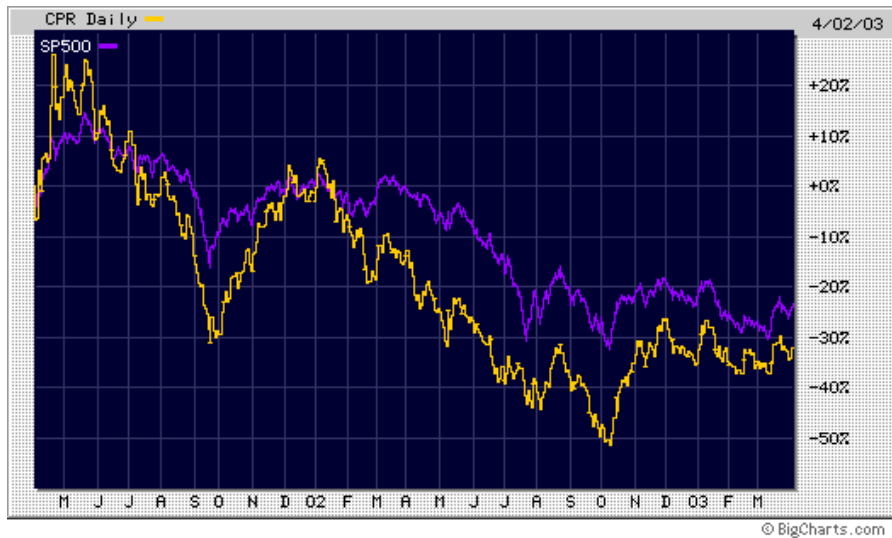
Other members of Dell's management include Kevin B. Rollins, President and Chief Operating Officer. He has been with the company since 1996 and is responsible for day-to-day operation of the company. 12 years prior to joining the Company, Mr. Rollins was employed by Bain & Company, an international strategy-consulting firm, most recently serving as a director and partner. Mr. Rollins received a Master of Business Administration degree and a Bachelor of Arts degree from Brigham Young University. Mr. Rollins is also a member of the National Advisory Council of Brigham Young University and a member of the CEO Forum on Education and Technology.

James T. Vanderslice serves as Vice Chairman of the Company. He is an advisor to Mr. Dell and Mr. Rollins, with an emphasis on procurement, manufacturing, product development and related issues. Dr. Vanderslice joined the Company as Vice Chairman in December 1999. Prior to joining the Company, Dr. Vanderslice served as Senior Vice President and Group Executive for IBM's Technology Group and was a member of IBM's corporate executive committee.

Other members of management include Joseph A. Marengi and Rosendo G. Para. They both serve as Senior Vice President of the company in the Americas. Marengi has been with the company since 1997 and Parra since 1993.

Relative Industry Valuation

The graph below shows the two-year comparison between the S&P 500 Index and the Dow Jones Computer Index. Just as a note the Dow Jones Computer Index follows the general computers industry exactly so it was not necessary to include it on this graph. When taking a look at the chart you can see that the computers industry has been under performing the S&P 500 Index by approximately 10% since February 2002. Currently it seems as though the industry is starting to come closer to the S&P Index. There isn't a good indication as to whether or not the industry is going to move downward, remain constant, or move up, but according to industry anticipations for the year there is a good chance that the industry will move upward hopefully along with or better than the S&P Index.



Fundamental Analysis

Ratio Analysis

Gross Profit Margin %	
DELL 2000	20.21
DELL 2001	17.7
2002	
INDUSTRY	19.81
DELL	17.93
HP	30.09
SUN	51.05
IBM	42.7

Gross Profit Margin: The gross profit margin ratio indicates how efficiently a business is using its materials and labor in the production process. It shows the percentage of net sales after cost of goods sold. A high gross profit margin indicates that a company's business can make a reasonable profit on sales, as long as it keeps overhead costs and control.

This figure indicates that Dell is not that efficient with cost control, it also in turn indicates that the company isn't as profitable compared to its rivals. However, Dell's performance in this area comes close to the industry's performance. However, we do expect for these results to change especially since Dell is taking full advantage of the weakness of HP & Compaq merger. It will be in this period of time that Dell will act very competitive to adjust prices to heighten its position as a leader in its industry knowing the weakness of the recent merger and will thus operate with efficiency.

Net Profit Margin %	
DELL 2000	6.83
DELL 2001	4
2002	
INDUSTRY	0.24

DELL	5.99
HP	-1.08
SUN	-19.44
IBM	4.41

Net Profit Margin: This ratio is the percentage of sales dollars left after subtracting the Cost of Goods sold and all expenses, except income taxes. Net profit margin tells you how much profit a company makes for every \$1 it generates in revenue. Dell generate more profit from every dollar in revenue when compared to HP and SUN. It provides a good opportunity to compare your company's "return on sales" with the performance of other companies in your industry. It is calculated before income tax because tax rates and tax liabilities vary from company to company for a wide variety of reasons, making comparisons after taxes much more difficult. This basically means DELL makes close to \$7 in profit from every dollar or revenue.

ROE %	
DELL 2000	38.72
DELL 2001	24.2
2002	
INDUSTRY	1
DELL	44.36
HP	N/A
SUN	N/A
IBM	15.7

ROE: Return on Equity reveals how much profit a company earns in comparison to the total amount of shareholder equity found on the balance sheet. A business that has a high return on equity is more likely to be one that is capable of generating cash internally. Return on Equity is generally used to measure a firm's performance. DELL return on equity reveals that it has turned its stockholders' equity into profit better than the industry and IBM significantly!

ROA (current)%	
DELL 2000	22.38
DELL 2001	15.8
2002	
INDUSTRY	0.4
DELL	23.78
HP	(-0.9)
SUN	-17.6
IBM	3.7

ROA (total)%	
DELL 2000	15.9
DELL 2001	9.21
DELL 2002	13.72

ROA: Return on assets tells an investor how much profit a company generated for each \$1 in assets. The lower the profit per dollar per asset, the more asset intensive a business is. The higher the profit per dollar per asset, the less asset intensive a business is. All things being equal, the more asset intensive a business the more money must be reinvested into it to continue generating earnings. Dell is using its assets for effectively then its main three competitors plus the industry. Dell's ROA has a downward trend, because the computer industry was hit hard in the year 2002.

Dupont Analysis

Operating performance is improved in two different ways:

1. Return on Assets
2. Return on Equity

Return on Assets basically consists of Profit Margin x Asset Utilization can be explained in the following way:

ROA: net income/sales x total revenue/average total assets for period

Return on Equity consists of Net Income divided by Common Equity. The return on equity consists of three drivers: profit margin, asset utilization and the equity multiplier.

Or:

Return on Assets can be explained in the following way:

ROE = net income/sales x sales/assets x assets/total equity

These three drivers explain the impact made by decisions on cost control, efficiency, management decisions, marketing strategies etc. In a nutshell, these are the three ways a company can increase its operating performance. Basic decisions made on debt, equity, price of a product, or unit costs will ultimately have an effect on profit, cost and financial health of a company. Managers must understand these basic concepts to help them better serve their customers and investors.

Calculations:

ROA:

Average total assets for period 1999 to 2002 is 14225.

2000: $2177/31888 \times 31888/14225 = .0683 \times 2.2417 = 15.3$

2001: $1246/31168 \times 31168/14225 = .0400 \times 2.19 = 8.76$

2002: $2122/35404 \times 35404/14225 = .0599 \times 2.49 = 14.9$

ROE:

2000: $2177/31888 \times 31888/13670 \times 13670/5622 = .0683 \times 2.33 \times 2.43 = 38.7$

2001: $1246/31168 \times 31168/13535 \times 13535/4694 = 4.0 \times 2.30 \times 2.88 = 26.5$

2002: $2122/35404 \times 35404/15470 \times 15470/4873 = .0599 \times 2.2886 \times 3.1746 = 43.52$

EPS \$	
DELL 2000	0.83
DELL 2001	0.48
2002	
INDUSTRY	N/A
DELL	0.8
HP	1.26
SUN	-0.18
IBM	2.06

P/E %	
DELL 2000	51.4
DELL 2001	35.98
2002	
INDUSTRY	N/A
DELL	35
HP	26.3
SUN	N/E
IBM	38.2

Inventory Turnover	
DELL 2000	63.61
DELL 2001	75.7
2002	
INDUSTRY	79.1
DELL	99.5
HP	8.4
SUN	10.8
IBM	12.5

Inventory Turnover Ratio: Inventory Turnover equals the LTM cost of goods sold divided by the average inventory from the most recent balance sheet and the corresponding balance sheet a year ago. Inventory Turnover measures inventory management efficiency. Compared to competitors, DELL has a higher inventory turnover ratio than SUN & IBM & HP, which means it is managing inventory effectively. Also, because Dell is a direct seller of PCs, this allowed them to have a better grasp of current demand trends and control their inventory levels.

Current Asset Turnover

DELL 2000		1.98
DELL 2001		2.16
2002		
INDUSTRY		1.9
DELL		4.21
HP		1.2
SUN		0.8
IBM		0.9

Current Asset Turnover: This ratio reflects the number of times that current assets turn over in a year. As a comparison to sales, it is a less stringent measure of liquidity than the Current asset Turnover. When you compare DELL to its competitors and the industry, the number of times that it turns its current assets over in a year is probably twice as much.

Current Ratio		
DELL 2000		1.43
DELL 2001		1.05
2002		
INDUSTRY		1.49
DELL		1
HP		1.49
SUN		1.59
IBM		1.21

Current Ratio: The current ratio measures the company's ability to pay short-term creditors by assets that can be quickly converted to cash. A ratio of 1.0 indicates a reasonable liquid position, but as the ratio declines, the firm must rely increasingly on converting inventories to sales to meet current liabilities, as they are due. The Current Ratio measures current assets available to cover current liabilities, a test of near-term solvency. The ratio indicates to what extent cash on hand and disposable assets are enough to pay off near term liabilities. Higher ratios indicate a better buffer between current obligations and a firm's ability to pay them. The quality of current assets is a critical factor in interpreting this analysis. In this area, Dell has a better status in terms of paying off short-term creditors when compared to IBM.

Quick Ratio		
DELL 2000		1.05
DELL 2001		0.79
2002		
INDUSTRY		1.2
DELL		0.76
HP		1
SUN		1.1
IBM		1

Quick Ratio: The Quick Ratio indicates liquid assets available to cover current debt. It is also known as the Acid Ratio. This is a “harsher” version of the Current Ratio, which balances short-

term liabilities against cash and liquid instruments. Generally, any value of less than 1 to 1 suggests an over-reliance on inventory or other current assets to pay off short-term debt. Dell needs to improve in this area especially since this ratio is not over 1. We think Dell will definitely exceed in this area because sales from last quarter are up 18%, plus Dell made strategic moves by lowering their prices to gain market share during the merger of HP & Compaq. It is believed that the industry will continue to see effects of the merger in the future. These effects may be negative in nature and thus a positive for Dell.

Leverage Ratio	
DELL 2000	1.73
DELL 2001	2.88
2002	
INDUSTRY	2.24
DELL	3.17
HP	1.98
SUN	1.85
IBM	4.24

Leverage Ratio: The leverage ratio gives an indication of how highly leveraged, or *how much money a company has borrowed*. A higher ratio means that their assets exceed stock equity, indicating higher financial leverage. In this area, IBM is borrowing more than DELL. SUN & HP are borrowing less than DELL along with the industry. Thus, Dell needs to decrease the amount it borrows to do better than its peers.

Total Debt/Equity Ratio	
DELL 2000	1.3
DELL 2001	1.6
2002	
INDUSTRY	0.08
DELL	0.11
HP	0.25
SUN	0.21
IBM	1.14

Total Debt/Equity: Total Debt/Equity measures how much money a company should safely borrow in the long run. The total debt to equity has decreased from 2000 to 2002. A higher debt compared to equity results in more volatile earnings and raises the chances of defaulting on debt.

Dell Computer Corporation #2

Income Statement

	% of		% of		Chg.	% of		Change	% of		Chg
	2000 Net Rev		2001 Rev		'00 - '01	2002 Net Rev		01-'02	2003E Net Rev		02 - '03E
Revenue:											
Net Revenue	31888		31168		-0.02	35404		0.14	38721		0.09
Cost of Rev	25445	0.80	25661	0.82	0.01	29055	0.8207	0.13	31187	0.81	0.07
Gross Margin	6443		5507	0.18	-0.15	6349	0.18	0.15	7534	0.19	0.19
Operating Exp:											
Selling...	3193	0.10	2784	0.09	-0.13	3050	0.09	0.10	3152	0.08	0.03
R & D & E	482	0.02	452	0.01	-0.06	455	0.01	0.01	695	0.02	0.53
Special Chrg	105	0.00	482	0.02	3.59	0		-1.00	96		
Total Operating	3780		3718	0.12	-0.02	3505	0.10	-0.06	3943	0.10	0.12
Oper. Income	2663	0.08	1789	0.06	-0.33	2844	0.08	0.59	3591	0.09	0.26
Invest. & Oth.	531		-58		-1.11	183	0.01	-4.16	27		-0.85
Income Before Taxes	3194	0.10	1731	0.06	-0.46	3027	0.09	0.75	3618	0.09	0.20
Income Taxes	958	0.03	485	0.02	-0.49	905	0.03	0.87	807	0.02	-0.11
Income After Taxes	2236		1246	0.04	-0.44	2122	0.06	0.70	2811	0.07	0.32
Cum Effect	59		0			0			0		
NI	2177	0.07	1246	0.04	-0.43	2122	0.06	0.70	2811	0.07	0.32

EPS(basic) Before Cum. Eff.	0.87	\$0.48	\$0.80	\$1.04
EPS(fully diluted)	0.81	\$0.46	\$0.80	\$1.04

# shs - Basic	2582	2602	2680	2710
# shs - Diluted	2746	2726	2644	2710

Relative Valuation

Dell Stock Price as of 4/22/03 = **\$29.89**
Current EPS = **\$0.80**
Current P/E = **35x**
Estimated EPS 2003 = EPS for 2003 = **\$1.04**

Forward P/E = Current Price/EPS 2003E
 $29.89/1.04 = 27.78x$

Estimated P/E for 2003 = 30x
Target Price = 2003 Est. EPS * 2003 Est. P/E

$$\$1.04 * 30 = \mathbf{\$31.20}$$

Multiple Cash Flow Model

CAPM
CAPM = $R_f + \text{Beta} (R_m - R_f)$
 $2.93 + 1.67(10-2.93)$
14.74%

Growth Rates (Assumed)
2004 = 13%
2005 = 12%
2006 = 12%

CF 1 = $[(\text{Net Income} + \text{Non Cash Expenses}) - \text{Capital Expenditures}]/\text{Shares Outstanding}$
Estimated for 2003
 $[2808 + (240 + 150) - (-350)]/2710$
\$1.31

$$\text{CF 2} = (1.31 * 0.13) + 1.31 = \$1.48$$

$$\text{CF 3} = (1.48 * 0.12) + 1.48 = \$1.66$$

$$\text{CF 4} = (1.66 * 0.12) + 1.66 = \$1.86$$

CF 5 = Assume Estimated P/E for 2006 is 36x and Estimated EPS is \$1.04

$$\begin{aligned} 2004 &= (1.04 * 0.13) + 1.04 = 1.18 \\ 2005 &= (1.18 * 0.12) + 1.18 = 1.32 \\ 2006 &= (1.32 * 0.12) + 1.32 = 1.48 \end{aligned}$$

$$2006 \text{ Estimated P/E} * 1.53$$

36 * 1.48 = **\$53.28** Dell Stock Value in Three Years

Discount all CF's:

$$1.31/(1.1474) + 1.18/(1.1474)^2 + 1.32/(1.1474)^3 + 1.48/(1.1474)^4 + 53.28/(1.1474)^4$$

\$34.51 Intrinsic Value

Relative Valuation Method #2

S&P 500

Year	High	Low	EPS	P/E High	P/E Low		
1994	482.85	435.86	31.75	15.21	13.73	S&P 500 4/9/03	865.99
1995	622.88	457.2	37.7	16.52	12.13	Est EPS for 04	59.5
1996	762.12	597.29	40.63	18.76	14.70	S&P trading at	15
1997	986.25	729.55	44.01	22.41	16.58	times 2004 est.	
1998	1244.93	912.83	44.27	28.12	20.62		
1999	1473.1	1205.46	51.61	28.54	23.36		
2000	1552.87	1254.07	56.13	27.67	22.34		
2001	1387.37	944.75	38.85	35.71	24.32	30E/15 = 2x	
2002	1176.97	768.63	35.98	32.71	21.36		
2003	935.05	788.9	53.71	17.41	14.69		
2004			59.5E				

Dell Computers

Year	High	Low	EPS	P/E High	P/E Low		
1994	0.74	0.3	NA	NA	NA	NA If Dell trades at:	
1995	1.54	0.62	0.85	1.81	0.73		
1996	4.02	0.72	1.34	3.00	0.54	1.5x S&P multiple	\$26.42
1997	12.66	3.12	2.70	4.69	1.16	1.6x S&P multiple	\$28.18
1998	37.9	9.92	0.36	105.28	27.56	1.7x S&P multiple	\$29.94
1999	55	32.37	0.58	94.83	55.81	1.8x S&P multiple	\$31.70
2000	59.69	16.25	0.66	90.44	24.62	1.9x S&P Multiple	\$33.46
2001	31.32	16.01	0.87	36.00	18.40	2.0x S&P Multiple	\$36.30
2002	31.06	21.9	0.48	60.71	45.63		
2003	29.77	22.59	1.04	30.00	21.72		
2004			1.21E				

Dell P/E relative to S&P 500

Year	
1994	NA
1995	0.11
1996	0.16
1997	0.21
1998	3.74
1999	3.32
2000	3.27
2001	1.01
2002	1.86
2003	1.72
2004	
Sum	15.40
Ave	1.71

Technical Analysis

Long Term Trend: 1989 -2003

This chart shows the long-term trend ranging from year 1989 to year 2003. The chart illustrates that Dell's stock price was trading at a consistent price beginning from 1998 to 1994. However, the sudden rise in the stock price actually occurred during year 1996 onwards to year 2000. In the middle of year 2000, Dell's stock price dropped a bit and has again been trading on a stable basis from year 2001 to present. In less than five year starting from year 1995, the price of Dell stock, which was probably \$5 or less at the time, went straight to almost \$60 in year 2000, which shows Dell, has the ability not only to compete with its peers but to succeed and be the leader in its industry.

1998-2003 – Long – Term Chart



This chart shows the Head & Shoulder Principle. As you can see the price fluctuates, showing a trend of upward and downward movement. One important thing to recognize from this chart is the recent trend from February to April 2003. If the head & should principle is a good way to forecast the direction of the price of a stock, do you think the recent trend will continue to rise for a long-term period?

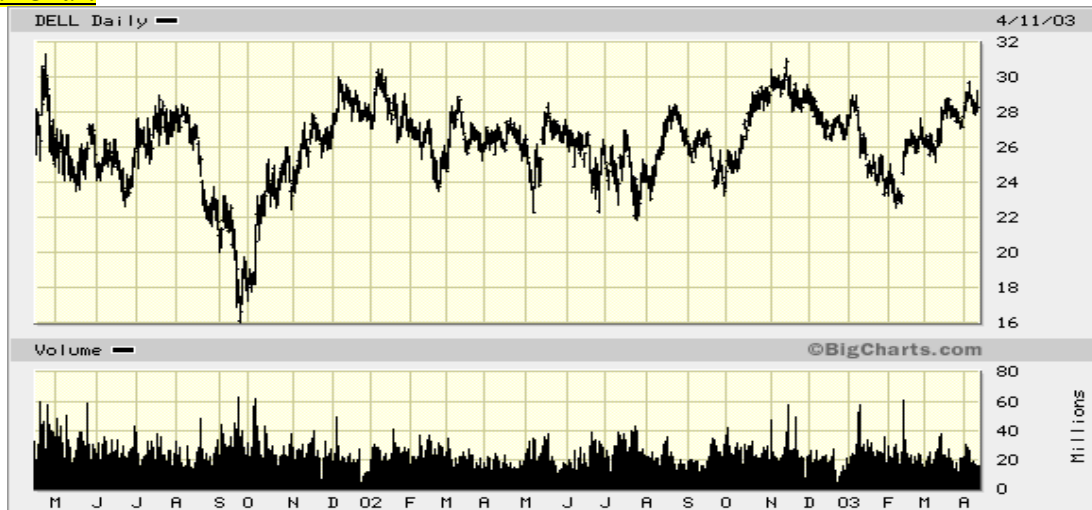
1 Year Chart



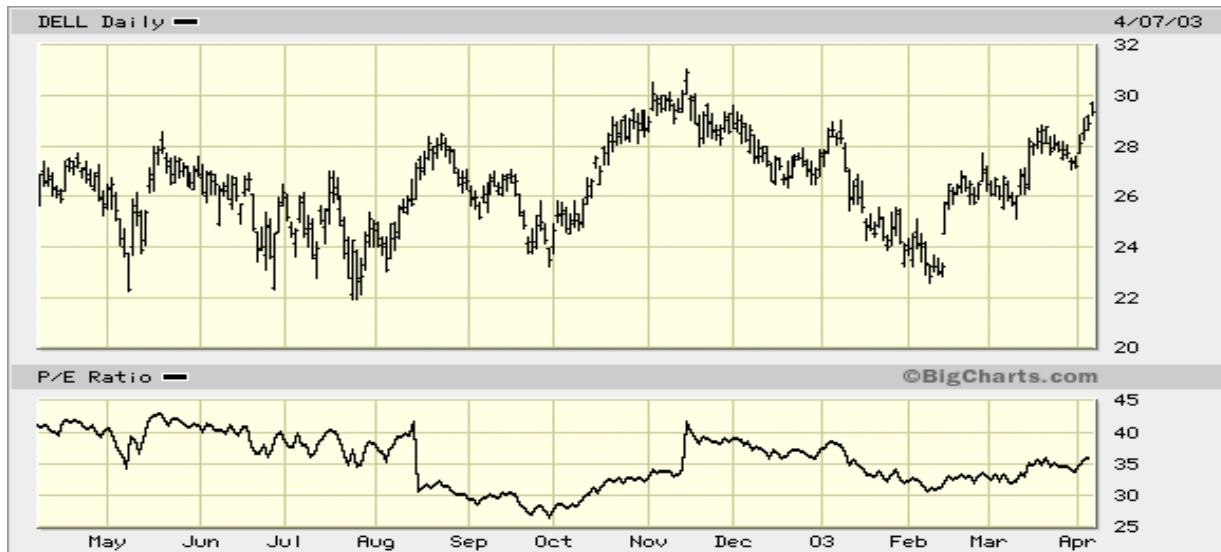
2-Year Chart:

The two-year chart will show the resistance and support prices of the Dell stock. The resistant level is about \$31 and the support level ranges from about \$24 to \$28. The most recent prices is within the support level.

2 Year Chart



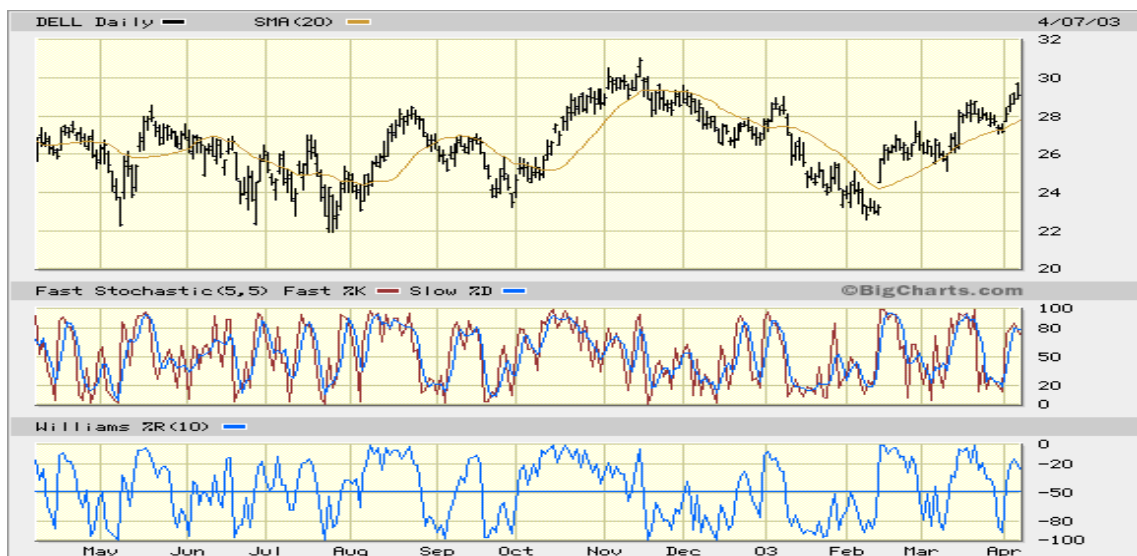
P/E Ratio Analysis



The P/E ratio of a company is very important to seeing how well a company is performing. It is a great relative valuation tool. The company's P/E is calculated by taking the price of the stock and dividing it by its earnings per share.

In this graph of Dell's stock price and P/E over the last year you can see that it has fluctuated. At the beginning of 2002 the stocks P/E was pretty high but was followed by a big downturn for approximately 3 months. This is reflected in the price fall in October. The P/E lately hasn't increased too much but looks as though it will be increasing in the near future. If we continue to see an increase in price and steady earnings per share this will result in Dell's P/E increasing. As their P/E moves up investors will be willing to pay more per each dollar of earnings.

Stochastics and William's Percentage R

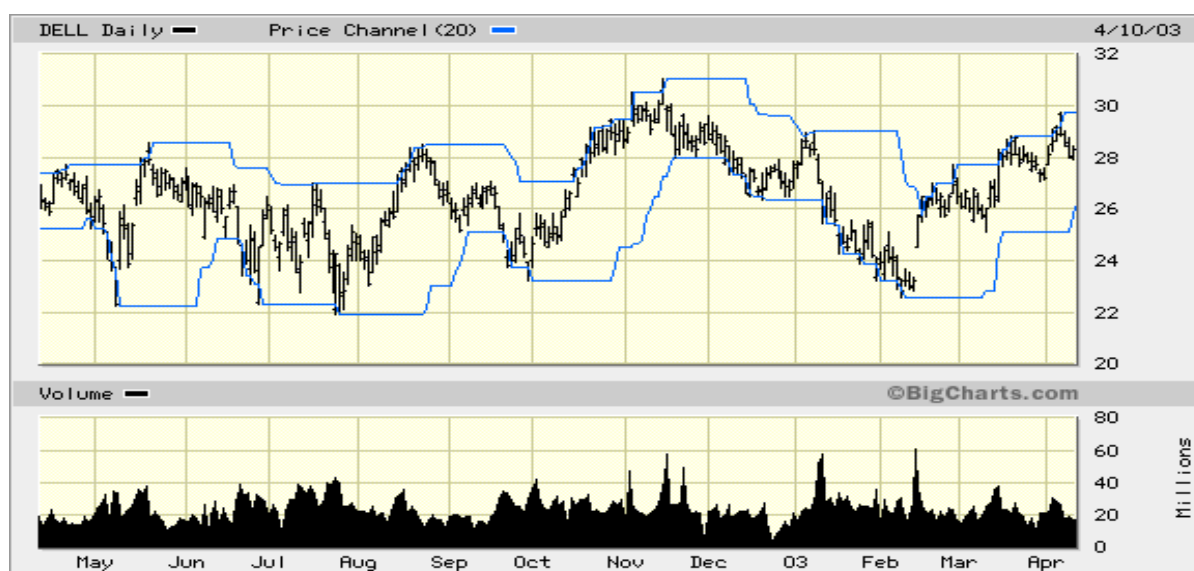


The above chart reflects momentum indicators. Both Stochastics and Williams %R try to measure when a stock is overbought (bearish) as well as when it is oversold (bullish). Both

indicators look pretty similar because they are showing the same basic concept. On the stochastic indicator when it moves up and through the 80% line it implies that the stock is overbought. When it moves down through the 20% line it indicates that the stock is oversold. When looking at the moving average if an overbought stochastic line goes down through the moving average a sell signal is produced and conversely when an oversold stochastic moves up through a moving average line a buy signal is produced.

The Williams %R indicator indicates the same just on a reverse scale. When the indicator is between -80 and -100 the stock is considered oversold and from 0 to -20 overbought. Currently this graph shows that Dell currently neither overbought or oversold. The stochastics line looks as though it may be moving down into Dell's moving average but at this point it's too early to tell and it is safe to say that the stock currently is not over bought or sold.

Trend/Trading Movement Analysis



The above graph shows the trading or trending movements of a stock. Until October of last year there wasn't a great amount of drastic movement in the buying and selling of Dell. Once October came around though the stock price did rise for a good month and then slowly make it's way back down until mid February of this year were you can see the trend has moved upward. The two upward trends we have recently seen in the stock may indicate that investors have recently become bullish about Dell's stock.

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