



Electronic Arts, Inc. Equity Research Report: *Challenge Everything: Including the Price!*

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Current Price: \$ 44.18
Target Price: \$42.00



Highlights:

- ❖ **Current Valuation** – Initiating ERTS coverage as a **SELL** with target of **\$42**. EA is a strong company that exhibits many of the strategic qualities of a prosperous company. However, the market has currently overpriced ERTS stock.
- ❖ **Financials** – Electronic Arts shows very strong financials looked at from both a current prospective and our forecasted pro-forma prospective. Particularly strong is EA's increased operating efficiency, R&D expenditures, Balance Sheet, and cash position.
- ❖ **Valuations** - Several valuation methods were used to predict Electronic Arts stock price. Our traditional discounted cash flow and multiples valuation were the primary drivers of our SELL initiation, predicting a steadying of sales forecasted out five years.
- ❖ **Drivers of Electronic Arts** – Drivers of ERTS are the ability for Electronic Arts to continue their strong relationships and licensing agreements as well as predict the acceptance rate of new platforms. There are no strong connections between economic drivers/measurements and ERTS stock price movements.

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ERTS Overview:

Company Description

“Electronic Arts Inc. develops, markets, publishes and distributes interactive software games that are playable by consumers on platforms, including home videogame machines, such as the Sony PlayStation 2, Microsoft Xbox, Nintendo GameCube and Sony PlayStation consoles; personal computers (PCs); handheld game machines, such as the Game Boy Advance, and online, over the Internet and other online networks. The products designed to play on consoles and handhelds, are published under license from the manufacturers of these platforms, such as Sony for the PlayStation and PlayStation 2, Microsoft for the Xbox and Nintendo for the Nintendo GameCube and Game Boy Advance. The Company pays a fee to the console manufacturers for the right to publish products on their platforms. Electronic Arts invests in the creation of software tools that it uses in product development and to convert products from one platform to another. ERTS creates, markets and distributes interactive entertainment software for a variety of hardware platforms. For the 3 months ended 6/30/04, revenues increased 22% to \$431.6B. Net income increased 32% to \$24.2M. Revenues were driven by demand for Harry potter and the Chamber of Secrets, The Lord of the Rings, and the newly introduced Madden 2004 games. Earnings also reflect improved operating margins due to cost reductions.”¹

Company Thesis

Electronic Arts has a strong catalog of franchise hits and steady revenue producing titles such as Madden NFL and James Bond. This catalog will help ERTS maintain a strong market share as competition grows fierce. ERTS has strong relationships and extensive licensing agreements with professional sports venues and celebrities we feel that it is possible for ERTS to release hits within the next 12 months. However caution is advised in this regard, as we do not consider this a sustainable competitive advantage. EA has already faced competition in this regard as competitors have attacked its pinnacle Madden Football line. Electronic Arts has shown solid stock appreciation, a strong catalog of existing and pipeline games, an efficient cost structure that warrants a premium multiple compared to its peers.

Industry Overview:

In 2002, NPD Group estimated the video game hardware, software, and accessories market to be approximately \$10BB, an increase in 2001 sales of 10%. IDC group estimates that the market increased to \$13.9BB in 2003. To compare these numbers, we see that the movie industry collected \$9.2BB on ticket sales during the same year.² We are anticipating this upward trend to continue however it will not be as great because we feel a large portion of this increase was due to online gaming accessory sales which is not covered in this report. Further elaborating on our consensus, we examine the competitors, suppliers, buyers, and barriers to entry to the industry.

¹ Source: OneSource Business Description

² IDC and USA Today http://www.usatoday.com/money/media/2004-08-26-video-games_x.htm



Competitors:

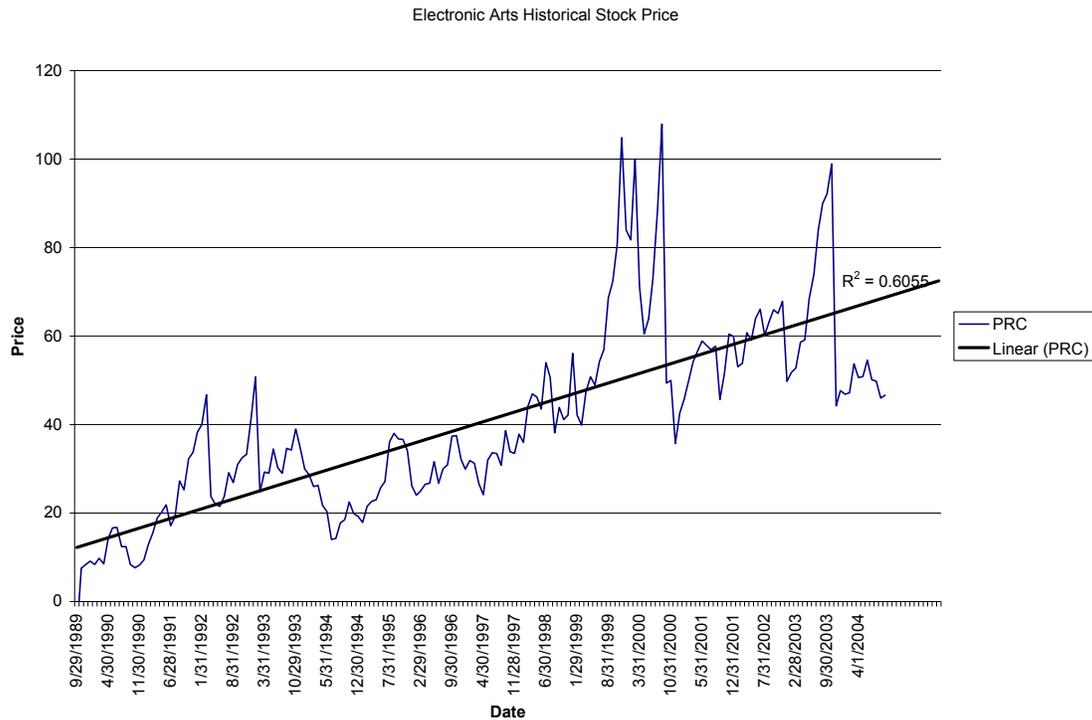
The competitive landscape in the interactive gaming market is broad and contains both publicly traded and privately held companies. The gaming industry has plenty of room for rivals, particularly content providers supplying several platforms. Non-public players in this industry were not financially evaluated, but considered when looking at potential game sales.

| Top 10 Publishers in Entertainment Software³ | | | |
|--|--------------------------|--------------------------|---------------------|
| | 2003 Market Share | 2002 Market Share | Share Change |
| Electronic Arts | 21.9% | 18.6% | 3.3% |
| Nintendo | 11.0% | 8.8% | 2.2% |
| THQ | 6.6% | 6.5% | 0.1% |
| Sony | 6.6% | 6.6% | 0.0% |
| Activision | 6.2% | 7.1% | -0.9% |
| Atari | 5.3% | 4.4% | 0.9% |
| Take 2 | 4.9% | 8.7% | -3.8% |
| Konami | 4.2% | 3.6% | 0.6% |
| Vivendi Universal | 3.8% | 2.3% | 1.5% |
| Namco | 3.8% | 2.9% | 0.9% |

Electronic Arts Historical Stock Performance

Electronic Arts, Inc. has shown very good historical growth. Clearly the trend of the stock price in the long run has been rising. The graph below shows the historical stock price and the solid black line shows the linear trend of the stock price. This linear trend was projected out for the next 12 months, which would forecast the stock price to be in the mid \$60 range. The behavioral finance pundits and technical analysts would translate this as a positive quality of the stock. While our fundamental analysis does not concur with this rudimentary projection, it is useful to benchmark our forecasts against what the market is forecasting for Electronic Arts value.

³ Source: NPD Funworld



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It is evident from this data that Electronic Arts shows a great deal of volatility. Using the linear trend line as a guide, we see that ERTS had two major deviations from the trend; 1999-2000 where the tech bubble inflated their stock price, 2000-2001 where the market correction deflated their stock, and in mid 2003. This last period seemed to be more news driven, as huge expectations were built into the stock preceding an annual industry conference and aggressive sales forecasts for key titles, only to fall back to earth after EA's Madden titles faced competition for the first time, and the company was compared to extremely fierce competition.

The graph below shows how ERTS has compared to its peers on a return basis. During its early years ERTS struggled, but in its later years we see that ERTS is clearly dominating the industry.

The table below shows various measures of Electronic Arts volatility based on price and returns. The chart also shows the correlation between Electronic Arts and the S&P composite and an Industry composite that represents the returns and stock price of several of their competitors.

⁴ Source: WRDS, Yahoo! Finance, Analyst Data.

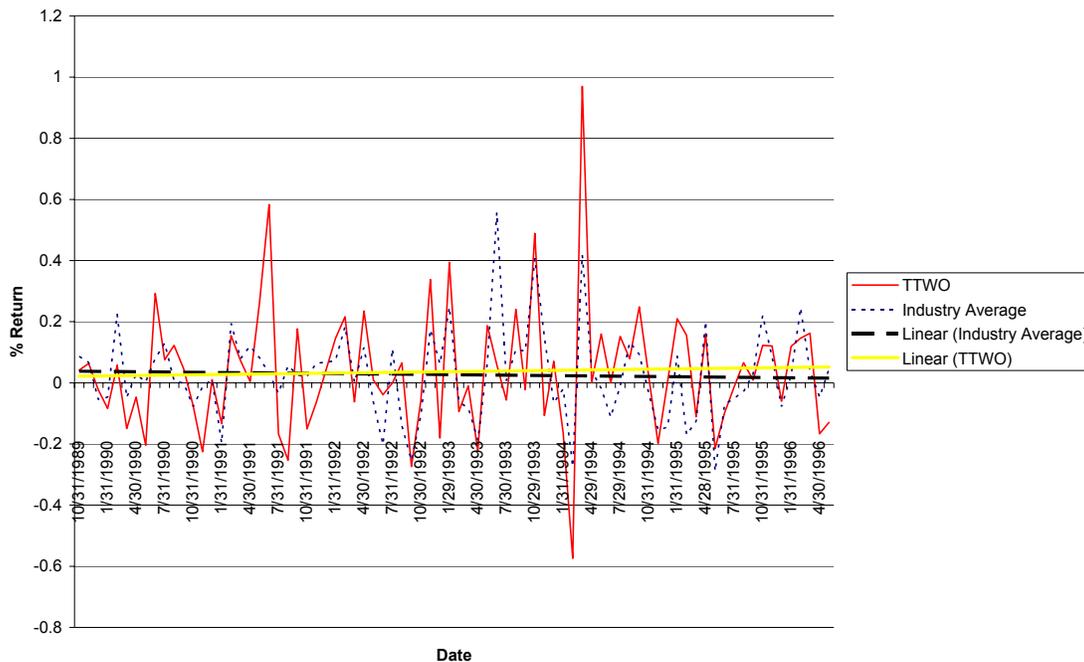


Stock Price Analysis⁵

| | ERTS | Industry | S&P |
|---|-------------|-----------------|----------------|
| <i>Standard Deviation of Stock Price</i> | 20.90307 | 10.2435 | N/A |
| <i>Standard Deviation of Stock Return</i> | 0.149096 | .197253 | 0.043017 |
| <i>Sharp Ratio</i> | -0.31335 | -3.57837 | N/A |
| <i>Maximum Holding Period Return</i> | 0.676471 | 3.27272 | 0.111588 |
| <i>Minimum Holding Period Return</i> | -0.32323 | -.60714 | -0.1458 |
| <i>Average Holding Period Return</i> | 0.038202 | .025803 | 0.007724 |
| <i>Correlation (ERTS v ...)</i> | 1 | .447168 | 0.327661359 |

In our Industry Initiation Report (Interactive Entertainment Industry Analysis: Video Games Have Become Mature, September 19, 2004) we discussed the maturing of the video game industry. The graph below shows Electronic Arts holding period return on a monthly basis compared to the average of an industry composite consisting of competing gaming software developers. We can see from the trend line that over time both Electronic Arts and the entire industry have been smoothing out their returns, showing us that the industry is indeed maturing.

ERTS vs Industry Composite



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⁵ Source: WRDS, Yahoo! Finance, Analyst Calculations

⁶ Source: WRDS, Yahoo! Finance, Analyst Data

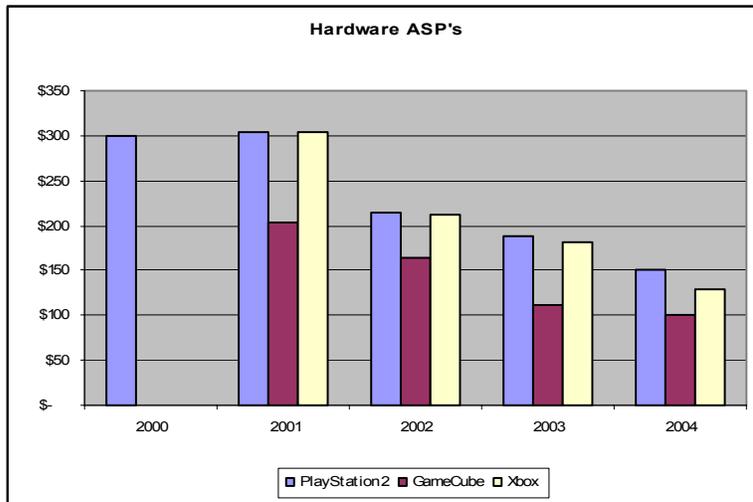


Selected Financial Data: Drivers for Growth

Industry Console Sales:

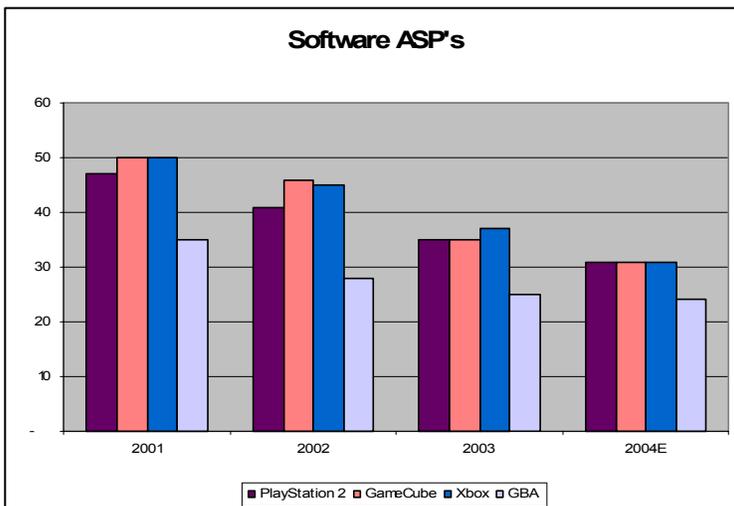
As discussed in the Industry Overview piece, the gaming platform industry is entering its final year of a 6 year cycle before the next generation of products is released. In the past, this has created a domino effect of lowered pre-existing platform retail prices, slower unit sales, lower average selling prices for software released for those consoles, and slower growth in aggregate software sales by platform. The below charts give a clearer picture of what has happened in the industry, and how it relates to our sales forecast.

Chart 1: Hardware Average Selling Prices⁷



Hardware sales for the PS2, Xbox and GameCube have fallen on average 15%, 25%, and 20% respectively over the past 5 years.

Chart 2: Software Average Selling Prices⁸



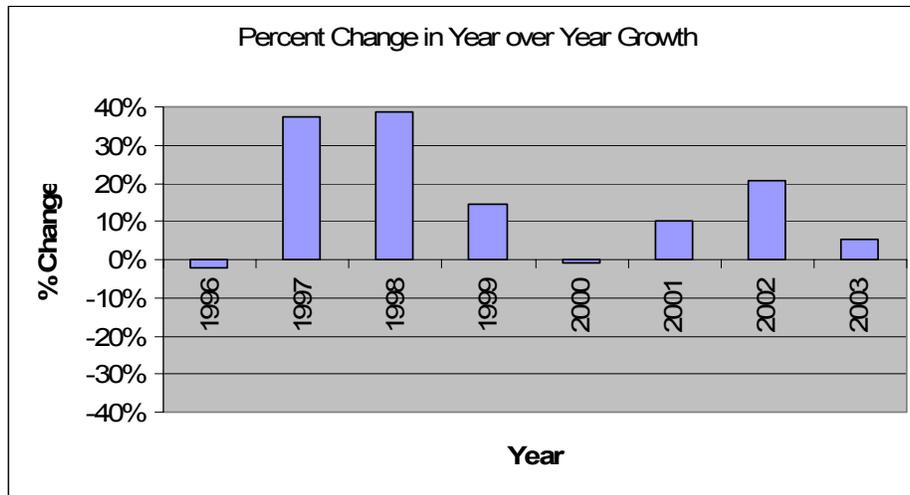
Software sales for all platforms have fallen approximately 14% per year over the past 3 years

⁷ Source: NPD Group / NPD Funworld / TRSTS video game service and UBS

⁸ Source: NPD Group / NPD Funworld / TRSTS video game service and UBS

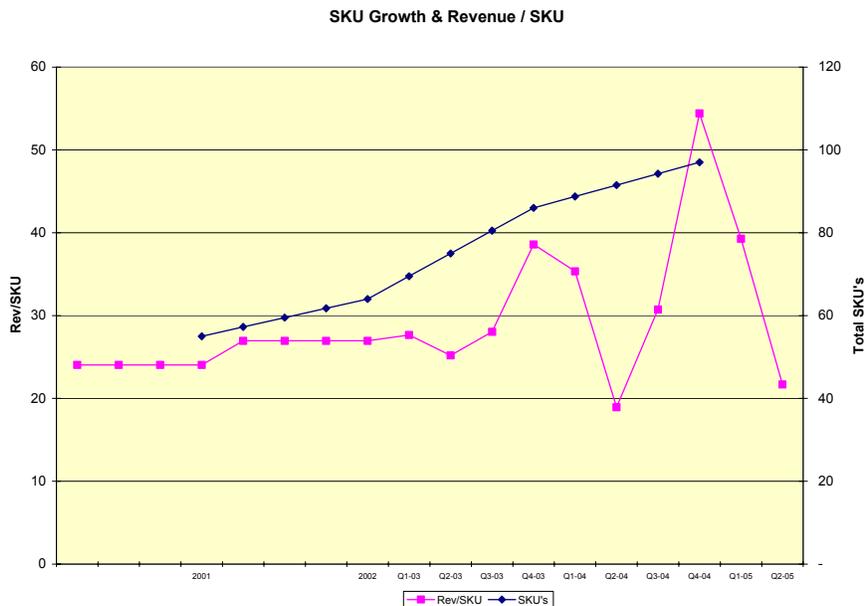


Chart 3: Total Software Sales % Change Year over Year⁹



Given this backdrop for falling prices in software and hardware, we have forecasted sales by examining the relationship between quarterly sales and Stock Keep Units (SKU's). Management at Electronic Arts has recently advised on expected SKU's and sales per SKU's over the next two quarters, and future sales were forecasted using historical growth rates for Electronic Arts product releases.

Chart 4: SKU Growth & Revenue/SKU¹⁰



⁹ Source: NPD Group / NPD Funworld / TRSTS video game service and UBS

¹⁰ Company Report.

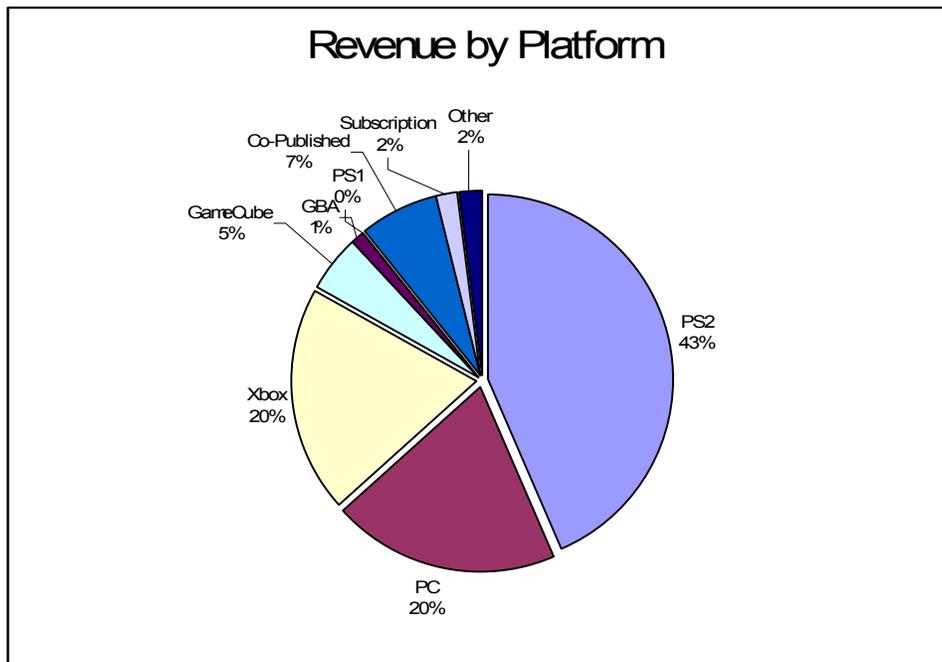


While consistently growing every year by an average rate of 21%, the number of releases is expected to fall off the next two quarters. Facing a steep drop over the past two quarters, Revenue / SKU is expected to rebound as EA enters the holiday season and a majority of their franchise games are released. This rebound should be short lived, and we have forecasted Revenue / SKU to fall below, and then quickly back to its average level of \$29.1M / SKU. For the third quarter of fiscal 2005 we are forecasting sales of \$1.5B, and \$3.3B for fiscal 2005. It may be aggressive to forecast a quick rebound in the SKU / Revenue price value, but we believe EA's platform commitment and loyal customer base to franchise brands will offset a majority of the cyclical downturn by 2006.

We believe that even our aggressive forecast falls short of market expectations for the sales growth of Electronic Arts. While there is considerable attention paid to next year's replacement cycle, popular opinion seems to be favorably swayed by management's commitment to continue software development for older platforms over the near term, and the entry of two new handheld platforms from Nintendo and Sony. While we believe that these drivers can be fully accounted for by a prompt return to an average Revenue / SKU ratio of \$29.1B within 3 quarters, the investing public seems to have an even more aggressive opinion. Using our free cash flow model inputs, we estimate that the market is forecasting annual sales growth over the next two years at 12%. During the last replacement cycle, EA annual sales growth over the first two years was less than 5%.

Platform Diversification & Commitment to Franchise Titles

While diversified across other platforms, Electronic Arts revenue mix has slowly shifted from the PC end market focus, to Sony's Play Station 2 platform. With this strategy, and the firm's focus on sports product lines, EA has evolved into the pre-eminent pure play entertainment software developer.



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EA’s concentrated sales in the PS2; which has not followed the latest Microsoft’s console price cut, and significant presence in the PC gaming market further supports our forecast for a strong holiday season and a return to average SKU sales levels in the next three quarters. Electronic Art’s consistently has many of the top sellers across all platforms and regions. The latest sales data released by UBS gives EA four of the top ten slots, with titles such as Tiger Woods PGA Tour 2005, Def Jam Fight for New York, Burnout 3: Takedown, and Madden NFL 2005. It’s no mistake that half of those titles are sports related, and three out of four are established franchises. Each of those titles have sold over 1.5 million copies, and Madden has sold over 4 million copies including 350,000 “Special Collector Editions” priced at a premium that sold out in less then 2 weeks. The practice of building franchise titles rather than focusing on potential one hit title releases has established EA as the industry leader.

EA’s upcoming releases for the third quarter consist primarily of established sports titles, and follow up content blockbusters like the ‘Lord of the Rings’ genre. The key point to take away from this release schedule is that during the holiday season EA is not banking on a single first time product. All of these titles have had successful earlier releases that guarantee an existing loyal consumer base. We cite this as further evidence that EA will have a fast turnover from the recently declining revenue / SKU ratio.



| Electronic Arts Third Quarter Title Releases ¹² | | | | | |
|--|-----|----|------|----------|-----|
| Title | PS2 | PC | XBOX | GameCube | GBA |
| NBA Live 2005 | X | X | X | X | |
| FIFA 2005 | X | X | X | X | X |
| Total Club Manager 2005 | X | X | X | | |
| NCAA March Madness 2005 | X | | X | | |
| NFL Street 2 | X | | X | X | |
| LOTR: The 3rd Age | X | | X | X | X |
| LOTR: Battle for Middle Earth | | X | | | |
| Medal of Honor: Pacific Assault | | X | | | |
| Medal of Honor: Pacific Assault DC | | X | | | |
| Need for Speed Underground 2 | X | X | X | x | x |
| The Urbz: Sims in the City | X | | X | x | x |

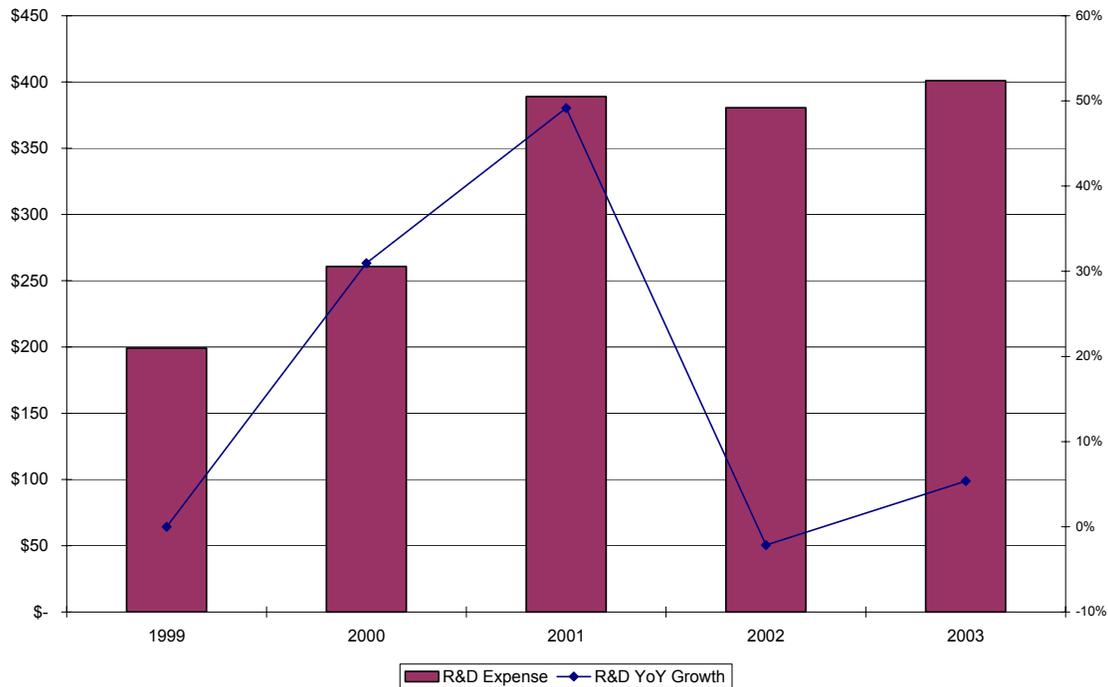
Costs Going forward for EA

With our aggressive sales forecasts, we also see Electronic Art's costs appreciating at a much faster rate over the next year. More specifically, we expect the firms research and development expense to increase by 40% over fiscal 2005 and 2006. In the past, the firm has seen its research and development expense increase 22% on average per year over the last platform replacement cycle, with a hyper cost period the year before and after the platform launch.

¹² Company reports.



R&D Expense (\$MM) and Growth



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We have forecasted a similar pattern for the upcoming replacement cycle, but with a higher cost ratio going forward. We believe as this market becomes increasingly more competitive content developers will be further differentiated by the end product quality. Management at Electronic Art’s has signaled a similar belief with their recent acquisitions of two technology development teams, Criterion Games and RenderWare.

Here again we believe our opinion is counter to the popular belief. It is reasonable to assume that as Electronic Arts continues to grow and gain expertise within the industry its research & development expenditures will become less of a percentage of overall costs. We counter this assumption with empirical evidence provided by similar industries. As other software developers have evolved, they have faced truncated version replacement cycles, and stiffer competition as new entrants enter a very profitable sector with few barriers to entry. Electronic Art’s will face similar market issues over the next cycle, so we have appropriately increased their costs to reflect these challenges.

Examining the Profitability of Electronic Arts vs. its Peers

Electronic Arts operates in a software industry that is just getting a handle on what defines a successful player in the field. As previously discussed, the software gaming industry is beginning to mature, and the players that have a clear strategy to manage fast pace growth and an efficient cost structure are emerging as leaders. With the rate that the



aggregate gaming software market is growing, we thought it appropriate to take a step back and evaluate Electronic Arts performance versus its peers. To do so, we will discuss the earnings growth rate, return on assets, and economic value added of Electronic Arts and a few of its competitors. (See the table below for all calculations)

Electronic Arts has a very successful history in regards to its earnings growth over the past 3 years. Cumulatively expanding earnings by 440%, EA has vastly outperformed its competitors. Most competitors have been riddled with difficult annual periods falling from positive earnings growth. Electronic Arts has had only one difficult year in the past 5 years. That's saying a lot considering this is a leisure industry that has just emerged from a national recession.

But earnings growth is only one accounting measure used to evaluate performance, and it certainly has its caveats. Specifically, it does not take into consideration the capital deployed to achieve that earnings growth. To address this, we have also compared EA to its peers on a Return on Assets basis. This way, we can compare how well each firm has performed given the assets they have deployed. Here again, EA proves to be the most effective with its use of capital, earning a 17% return on assets over 2004, significantly higher than its peer group.

Finally, we compare each of the firm's ability to generate economic profit over time. While it is important to review how well the firms deploy their capital, ROA fails to take in account the cost of raising that capital. By calculating the economic performance spread of EA and its peers we learn that EA has not only successfully grown earnings and deployed capital, but it has done so at a higher spread of return on investment capital to cost of capital.



Examining the Profitability of Electronic Arts vs. its Peers

| | EPS Growth Comparison | | | | Return on Assets Comparison | | | | EVA Analysis | | | |
|--------------|-----------------------|---------------------|--------------------|--------|-----------------------------|---------|---------|---------|---------------|--------|-------|--------|
| | 2002 | 2003 | 2004 | Cum. | NI | 2002 | 2003 | 2004 | ROIC | 2002 | 2003 | 2004 |
| ERTS | \$ 0.35 | \$ 1.07 207% | \$ 1.87 76% | 440% | NI | \$ 102 | \$ 317 | \$ 577 | ROIC | 10.2% | 14.5% | 16.4% |
| | | | | | T. Assets | 1,699 | 2,360 | 3,401 | WACC | 9.7% | 8.9% | 7.9% |
| | | | | | ROA | 6% | 13% | 17% | Spread | 0.5% | 5.6% | 8.5% |
| THQI | \$ 0.32 | \$ (0.20) -164% | \$ 0.92 557% | 192% | NI | \$ 13 | \$ (8) | \$ 36 | ROIC | 5.9% | 2.9% | 4.7% |
| | | | | | T. Assets | 537.86 | 472.95 | 527.15 | WACC | 11.0% | 10.6% | 7.0% |
| | | | | | ROA | 2% | -2% | 7% | Spread | -5.1% | -7.7% | -2.3% |
| ATVI | \$ 0.39 | \$ 0.43 9% | \$ 0.54 26% | 37% | NI | \$ 52 | \$ 66 | \$ 78 | ROIC | 12.0% | 7.8% | 10.3% |
| | | | | | T. Assets | 556.89 | 704.82 | 968.82 | WACC | 7.3% | 8.9% | 9.6% |
| | | | | | ROA | 9% | 9% | 8% | Spread | 4.7% | -1.1% | 0.7% |
| ATAR | \$ (0.16) | \$ 0.26 -264% | \$ (0.40) -254% | -154% | NI | \$ (11) | \$ 18 | \$ (39) | ROIC | -6.3% | 7.0% | 2.0% |
| | | | | | T. Assets | 241.86 | 232.08 | 193.96 | WACC | 8.0% | 10.4% | 14.0% |
| | | | | | ROA | -5% | 8% | -20% | Spread | -14.3% | -3.4% | -12.0% |
| AKLMQ | \$ (0.04) | \$ (0.73) -1777% | \$ (0.53) 27% | -1262% | NI | \$ (3) | \$ (68) | \$ (56) | ROIC | N/A | N/A | N/A |
| | | | | | T. Assets | 125.63 | 182.90 | 47.34 | WACC | N/A | N/A | N/A |
| | | | | | ROA | -3% | -37% | -119% | Spread | N/A | N/A | N/A |

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¹⁴ Source: Rochdale Research, Yahoo! Finance, Reuters



Improved Focus on Operational Efficiency

Electronic Arts competes in an industry that is both seasonal and cyclical, providing additional challenges to any management team. With such extreme changes in demand, firms competing in the gaming space will need to be as focused on nimble cost structures as product development. To evaluate Electronic Arts in this capacity, we will discuss how its cash conversion cycle, cash reserves, and acid test have changed over the years and if those momentums dictate a well run organization and how conservative management has become. This analysis will not give us any great insight into how EA compares to its peers, rather how it has coped with its fast growth and whether it has maintained a cost discipline over the years.

| Electronic Arts Efficiency Improvements | | | | |
|--|-------------|-------------|-------------|--------------------|
| | 2001 | 2002 | 2003 | 2004 |
| Inventory Turnover | 41.58 | 34.26 | 27.04 | 20 |
| Accounts Receivable Turnover | 7.58 | 9.05 | 30.24 | 13.95 |
| Cash Conversion Cycle | 49.16 | 43.32 | 57.28 | 33.96 |
| Cash Per Share | 3.53 | 5.57 | 5.4 | 7.73 |
| Acid Test | 2.00 | 2.03 | 3.25 | 3.34 ¹⁵ |

Over the past 4 years, the cash conversion cycle has fallen, cash per share has risen, and Electronic Art’s acid test has improved. A high inventory turnover number would indicate that EA has been ineffective in its buying practices. Electronic Arts has essentially cut this number in half over the past 4 years. A high accounts receivable turnover number implies that the firm has been efficient with its extension of credit through account receivable transactions. This ratio has improved over the years for EA, with a sizable improvement in 2003. We attribute this to more of a one time event than any specific change in their account receivables practice. Taken in aggregate, the cash conversion cycle tells us how quickly the firm can turn sales into hard cash. Again, EA has shown drastic improvement in its operational efficiency by reducing the cycle to 34 days from 49 days.

Electronic Art’s has also become more conservative over the years. During the last platform replacement cycle several firms edged towards bankruptcy as they miscalculated development costs and overestimated demand. It has become industry wide practice to raise substantial capital before this upcoming development period and EA is no exception. Further evidence to EA’s conservative slant has been the improving acid test over the years. By comparing the firm’s cash, accounts receivable, and inventory to its existing current liabilities we get a sense of how easily they can meet its obligations.

¹⁵ Company Reports



Again, EA has improved this number over the past 4 years. When devising our proforma's for the firm, we kept in mind to continue these trends on a forward looking basis.

Insider Ownership:

Insider ownership appears to be normal and would not indicate any reason to use this data to value the stock. The few charts below show the stock ownership data.

Overview¹⁶

| | |
|---|-----|
| % of Shares Held by All Insider and 5% Owners: | 1% |
| % of Shares Held by Institutional & Mutual Fund Owners: | 95% |
| % of Float Held by Institutional & Mutual Fund Owners: | 96% |
| Number of Institutions Holding Shares: | 10 |

| Top Insider Holding¹⁷ | Shares Held | % of Insider Shares | % of Shares Outstanding |
|---|--------------------|----------------------------|--------------------------------|
| PROBST, LAWRENCE F III | 603,451 | 45% | 0.20% |
| ASHER, M. RICHARD | 301,124 | 23% | 0.10% |
| BYRON, WILLIAM J. | 188,148 | 14% | 0.06% |
| MCKEE, E. STANTON JR | 157,785 | 12% | 0.05% |
| MOTT, TIMOTHY TRUST | 81,968 | 6% | 0.03% |

Stock Analysis Conclusion:

Electronic Arts is a strong company that deserves to be traded at higher multiples than the industry. ERTS has shown a long history of solid growth, strong financials, a strong sales catalog, and low agency costs. Looking at EA from an industry perspective, they are positioned well against their peers to continue to have a large market share in the near future but we do caution that rivalry against their EA Sports unit is growing fierce. Particularly in the US other "Football" games are becoming popular, but EA is positioning itself well for international sporting games. The industry itself is strong and there is reason to believe expanding at a rational rate. New platform launches do not appear to be an immediate problem, although EA itself admits that their continuing success relies on their predicting platform success. EA has been a volatile company when compared to market index portfolios, but shows the average volatility for its industry. Overall, Electronic Arts is a very strong company.

Currently, we feel that the market has overpriced Electronic Arts and initiate the company with a SELL, targeting the price at \$42.00 considering the next twelve month outlook.

¹⁶ Source: Yahoo! Finance

¹⁷ Source: Yahoo! Finance



Valuation of Electronic Arts, INC.

To value Electronic Arts we used several methods; discounted cash flow, multiples comparison, and an expected stock price model.

Discounted Cash Flow Valuation Model¹⁸

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | |
|--------------------------------------|------------------|---------------|---------------|---------------|-----------------|-----------------|------------------|
| Revenue | \$ 3,300 | \$ 3,573 | \$ 4,459 | \$ 5,566 | \$ 6,946 | \$ 8,670 | |
| - COGS | 1,331 | 1,445 | 1,803 | 2,251 | 2,809 | 3,506 | |
| - SG&A | 1,413 | 1,746 | 1,891 | 2,360 | 2,945 | 3,675 | |
| - Depreciation | 21 | 21 | 22 | 22 | 22 | 23 | |
| EBIT | \$ 536 | \$ 360 | \$ 743 | \$ 933 | \$ 1,170 | \$ 1,466 | |
| - Corporate Taxes | 179 | 129 | 248 | 307 | 381 | 474 | |
| + Δ Deferred Taxes | - | - | - | - | - | - | |
| NOPLAT | \$ 357 | \$ 232 | \$ 495 | \$ 626 | \$ 789 | \$ 992 | |
| + Depreciation | \$ 21 | \$ 21 | \$ 22 | \$ 22 | \$ 22 | \$ 23 | |
| - Delta Working Capital Requirements | 134 | 50 | 154 | 192 | 240 | 299 | |
| - Capital Expenditures | 33 | 28 | 28 | 29 | 29 | 30 | |
| FCF | \$ 210 | \$ 175 | \$ 335 | \$ 427 | \$ 542 | \$ 686 | |
| Continuation Value | | | | | | | \$ 15,853 |
| Discounted CF | \$ 210 | \$ 163 | \$ 290 | \$ 344 | \$ 407 | \$ 479 | \$ 11,063 |
| Value of Firm | \$ 12,956 | | | | | | |
| Value of Long-term Debt | \$ - | | | | | | |
| Value of Equity | \$ 12,956 | | | | | | |
| Shares outstanding | 304.08 | | | | | | |
| Price per Share Common Stock | \$ 42.61 | | | | | | |

| Key Data Assumptions to DCF Model: | |
|------------------------------------|--|
| Sales: | <ul style="list-style-type: none"> • Units - SKU's given by management, and historical growth rate • Price - SKU's / Revenue guidance by management and historical ratio. After the replacement cycle period, the average ratio is applied and grown at inflation. |
| COGS & Other Expenses: | <ul style="list-style-type: none"> • Historical rate of osales maintained |
| Research & Development: | <ul style="list-style-type: none"> • Forecasted a similar hyper cost period over the next two years, followed by historical percentage of sales. Rate raised to reflect higher technological expertise requirements |
| Depreciation: | <ul style="list-style-type: none"> • Used avg. life method over 15 years. Closest approximation to historical depreciation. |
| Corporate Taxes: | <ul style="list-style-type: none"> • Historic rate = 32% |
| Deferred Taxes: | <ul style="list-style-type: none"> • Held constant. |
| Accounts Receivable: | <ul style="list-style-type: none"> • Maintained Average DSO's |
| Inventories: | <ul style="list-style-type: none"> • Constant percentage of COGS = 3.0% |
| Capex: | <ul style="list-style-type: none"> • Used historical growth rate of 2.1%, taking into account depreciation per year. |
| Accounts Payable: | <ul style="list-style-type: none"> • Constant percentage of COGS = 10.6% |
| Accrued and Other Liab: | <ul style="list-style-type: none"> • Constant percentage of COGS = 46.0% |
| Inflation: | <ul style="list-style-type: none"> • 3.0% |
| Beta: | <ul style="list-style-type: none"> • Regressed ERTS's historical return vs. its peers = 1.12 |
| Risk Premium: | <ul style="list-style-type: none"> • 3.0% |
| Risk Free Rate | <ul style="list-style-type: none"> • Ten Year Treasury: 4.1% |
| WACC: | <ul style="list-style-type: none"> • 7.5% |

¹⁸ Source: Company reports, Yahoo! Finance, Analyst Data.



Multiple Valuation Model:¹⁹

The below model was used to synthetically calculate ERTS stock price on a multiples basis. The column “industry average” is a weighted average of each competitors multiple, weighted by the “Market Value – Equity”. The yellow highlighted area on the left shows the synthetic stock prices using various multiples and their average. The “Error off Market Price” shows how far off ERTS current stock price is based on the multiple valuation (with negative numbers representing the market is overvaluing ERTS). The yellow highlighted area on the right calculates the multiples difference from the industry average. Every multiple used prices EA well under the current stock price and our preferred discounted cash flow analysis.

| | Electronic Arts (ERTS) | Industry Average | Take Two (TTWO) | Activision (ATVI) | THQ (THQI) | Acclaim (AKLMQ.PK) | Midway (MWY) | Atari (ATAR) | SEGA (SEGNYPK) | Eidos (EIDSY) | Konami (KNM) |
|--|------------------------|------------------|-----------------|-------------------|---------------|--------------------|-----------------|---------------|-----------------|---------------|-----------------|
| Stock Price | 44.28 | | 33.67 | 14.07 | 18.83 | 0.02 | 11.83 | 1.58 | 3.30 | 1.94 | 23.25 |
| Number of Shares | 303,890,000 | | 44,900,000 | 138,260,000 | 39,150,000 | 129,570,000 | 84,190,000 | 121,280,000 | 689,040,000 | 140,280,000 | 120,480,000 |
| Market Value - Equity | \$13,456,249,200 | | \$1,511,783,000 | \$1,945,318,200 | \$737,194,500 | \$2,302,459 | \$995,967,700 | \$191,622,400 | \$2,273,832,000 | \$272,143,200 | \$2,801,160,000 |
| Debt (mil) | \$0 | | \$141,000 | \$0 | \$0 | \$41,360,000 | \$15,000,000 | \$9,560,000 | \$765,530,000 | \$0 | \$692,210,000 |
| Sales (mil) | \$2,957,141,000 | | \$1,033,693,000 | \$1,000,000,000 | \$630,940,000 | \$142,680,000 | \$109,130,000 | \$427,880,000 | \$1,860,000,000 | \$254,500,000 | \$2,410,000,000 |
| Book Value (mil) | \$2,749,596,720 | | \$568,658,500 | \$853,755,500 | \$453,944,250 | -\$115,965,150 | \$152,299,710 | \$126,252,480 | \$904,709,520 | \$141,261,960 | \$903,600,000 |
| Price-to-Sales | 4.55 | 2.08 | 1.46 | 1.95 | 1.17 | 0.02 | 9.13 | 0.45 | 1.22 | 1.07 | 1.16 |
| Market-to-Book | 4.89 | 2.92 | 2.66 | 2.28 | 1.62 | -0.02 | 6.54 | 1.52 | 2.51 | 1.93 | 3.10 |
| Asset Value to EBIT | 3.52 | 3.56 | 6.28 | 3.68 | 3.62 | -4.09 | 7.03 | 1.49 | 2.45 | 2.79 | 1.89 |
| Asset Value to Revenues | 0.930 | 0.63 | 0.550 | 0.854 | 0.719 | -0.813 | 1.396 | 0.295 | 0.486 | 0.555 | 0.375 |
| Firm Value | \$13,456,249,200 | | \$1,511,924,000 | \$1,945,318,200 | \$737,194,500 | \$43,662,459 | \$1,010,967,700 | \$201,182,400 | \$3,039,362,000 | \$272,143,200 | \$3,493,370,000 |
| EBITDA | \$781,460,000 | | \$90,570,000 | \$232,130,000 | \$125,304,684 | \$28,336,248 | \$21,673,218 | \$84,976,968 | \$369,396,000 | \$50,543,700 | \$478,626,000 |
| Net Earnings | \$577,292,000 | | \$98,118,000 | \$85,510,000 | \$35,500,000 | -\$56,410,000 | -\$78,850,000 | -\$50,320,000 | \$37,140,000 | \$39,440,000 | \$148,130,000 |
| Value / EBIT | 17.22 | 11.38 | 16.69 | 8.38 | 5.88 | 1.54 | 46.65 | 2.37 | 8.23 | 5.38 | 7.30 |
| PE Ratio | 23.31 | 14.39 | 15.41 | 22.75 | 20.77 | -0.04 | -12.63 | -3.81 | 61.22 | 6.90 | 18.91 |
| Electronic Arts vs. Industry Avg. | | | | | | | | | | | |

| | Stock Price | Error off Market Price |
|---------------------------------------|-------------|------------------------|
| Stock Price (V/EBIT method) | \$29.26 | -33.91% |
| Stock Price (PE Ratio method) | \$27.33 | -38.28% |
| Stock Price (Price-to-Sales) | \$20.27 | -54.21% |
| Stock Price (Market-to-Book) | \$26.45 | -40.26% |
| Stock Price (Asset Value to EBIT) | \$9.16 | -79.32% |
| Stock Price (Asset Value to Revenues) | \$6.14 | -86.13% |
| Average of All Methods | \$19.77 | -55.35% |
| Average of Relevant Measures | \$25.83 | -41.67% |

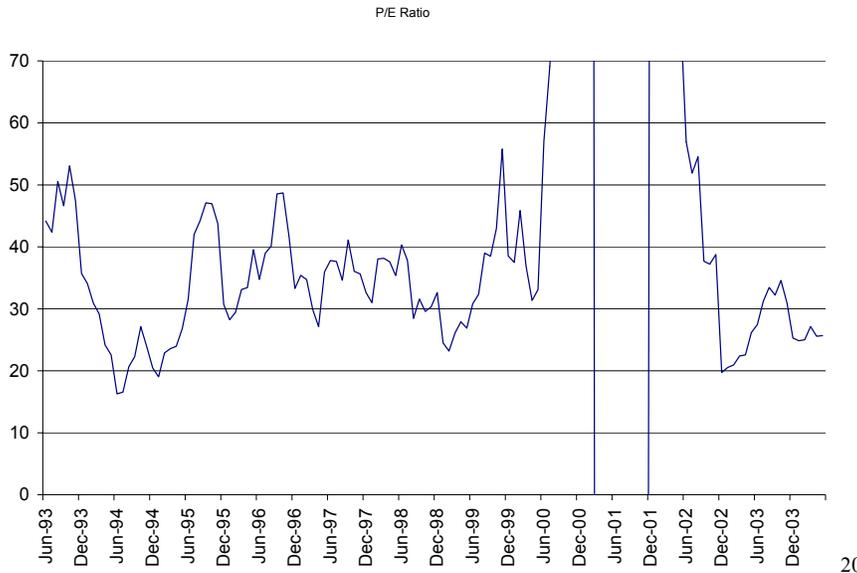
| | Percent Deviation In Multiple |
|-------------------------------------|-------------------------------|
| Error using V/EBIT | 51.31% |
| Error using PE Ratio | 62.02% |
| Error using Price-to-Sales | 118.40% |
| Error using Market-to-Book | 67.39% |
| Error using Asset Value to EBIT | -1.18% |
| Error using Asset Value to Revenues | 47.28% |
| Average Error | 57.54% |

¹⁹ WRDS, Yahoo! Finance, Analyst Data

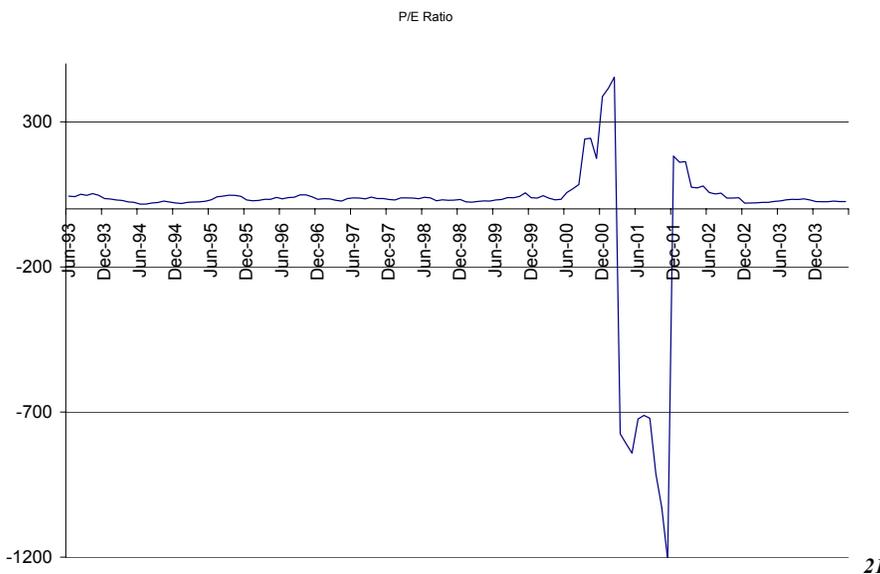


Historical P/E Ratio:

Historically, ERTS has traded at very varied price to earnings ratio. ERTS has always traded historically high compared to its peers which is partly why we feel they deserve to continue to be traded at a premium. At its peak, ERTS traded at 454 times earnings, and at its low, ERTS traded at -1,200 time's earnings. On average, (removing the extreme P/E's) ERTS trades at 53 time earnings.



This graph shows the P/E ratio on a smaller scale and shows the smaller movements in the ratio.



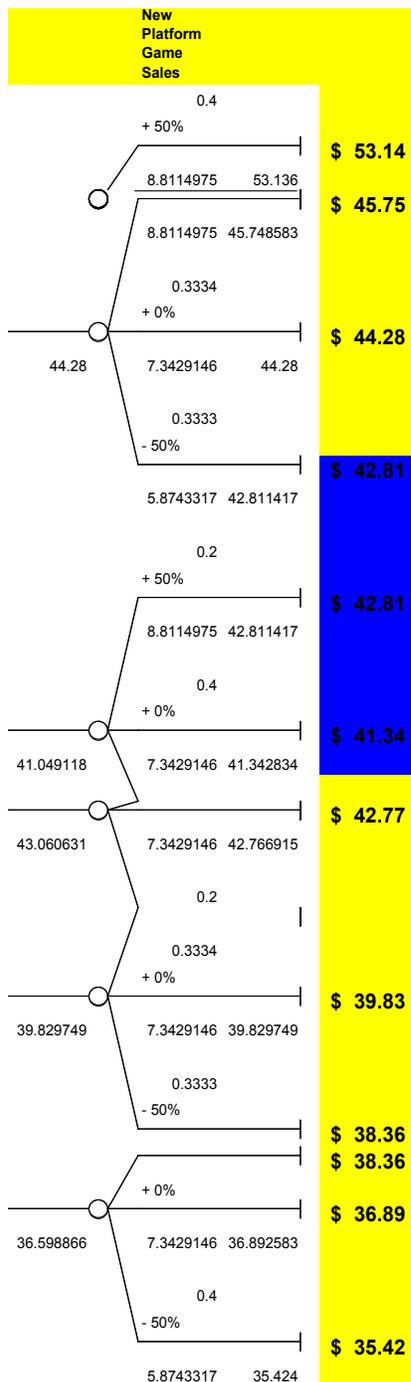
The second graph shows a larger scale and allows us to see the peak and trough from the tech bubble

²⁰ Source of Data: WRDS, Yahoo! Finance, Analyst Calculations.

²¹ Source of Data: WRDS, Yahoo! Finance, Analyst Calculations.



Expected Stock Price Decision Tree Model:



Another way we estimated Electronic Arts stock price is through an expected decision tree. What this approach does is take the main drivers of stock price, current game sales, new release game sales, and future platform game sales. New release sales affects stock price 2/3 as much as current game sales, and new platform sales affects stock price 1/3 as much as current game sales.

For each of these stock price drivers three levels of sales were forecasted, +10% Market Expectation, Market Expectation, and -10% Market Expectations. The probability that any of these levels are reached was determined and inputted in model. These probabilities are relative, meaning that they represent the probability that the market has priced the stock correctly. For instance, we believe there is a 95% chance that the market has accurately (+0%) priced the sales level.

As a base line we assume that the market has priced the stock use +0% levels of sales and have predicted the probability that they were correct as 95% for current game sales, 80% for new releases, and 33% for future platforms because current is easier to understand, new releases are mainly based on historic franchise sales, and it is a random walk whether ERTS sells well on undeveloped platforms.

Microsoft Excel Solver was then used to solve the variables so that the +0% branches of the tree returned the current stock price.

Using our sales forecasts we estimate that the market has accurately priced current game sales, overpriced new release sales, and accurately priced new platforms. For the stock price to be \$44, the market must believe current game sales to be \$2.95BB, future game sales to be \$11.98BB, and new platform sales to be \$22BB.

This indicates that current sales are \$2.95BB, as the market is predicting, new release sales are -5% of market predictions of \$11.98BB, and new platform sales are \$21BB, basically what the market is predicting.

The use of this model is to easily see how the stock price can change if assumptions about sales change.

Based off this model, we expect Electronic Arts, Inc. stock to trade between \$35.42 and \$53.14.

The target price for ERTS is \$42.16, which concurs with the results of this decision tree. We believe that the market is accurately pricing the revenues from current game sales and new platform sales, but overvaluing the new release revenue.



Correlation and Regression Analysis

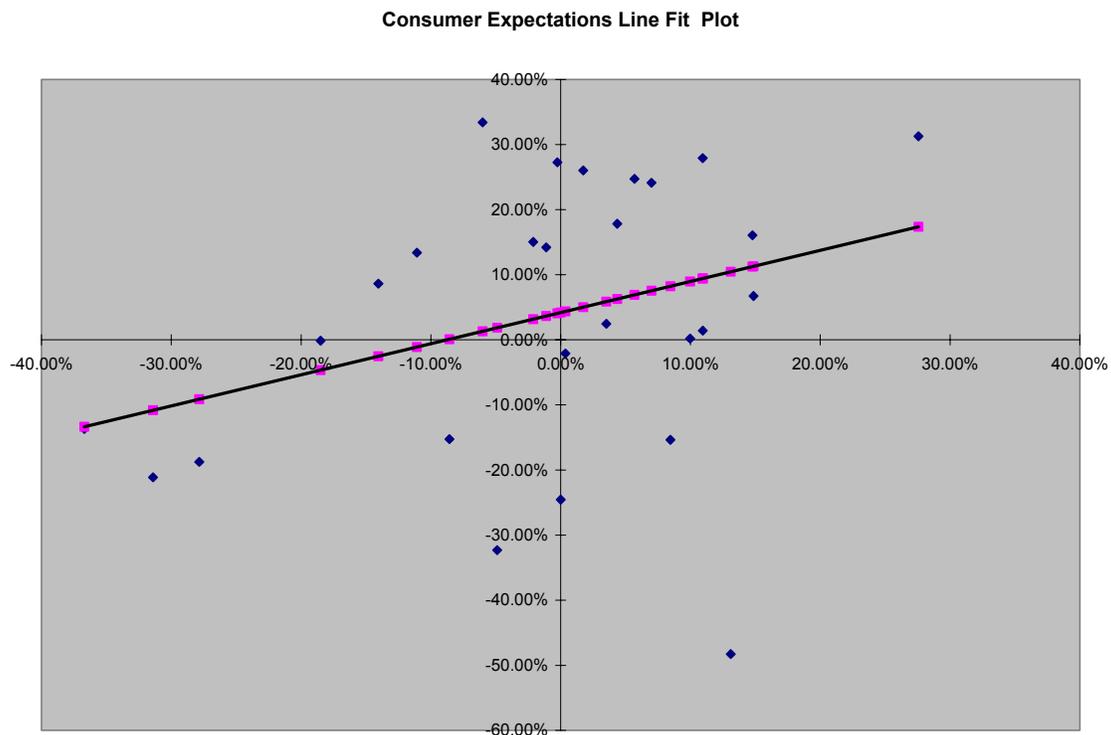
Correlations:

As a first attempt at finding a relationship between changes in Stock Return and economic factors, we ran a simple correlation. The below table lists the correlations we calculated mostly using quarterly periods, with the exception of Consumer Confidence, Present Situation, and Expectations index done on a monthly basis.

Domestic Expenditure at market Prices and Consumer Confidence Index (when measured quarterly) showed the strongest relationship with changes in Electronic Arts stock price. Respectively, those correlations are 32% and 23%. Exhibit 3 shows more details on the correlations that were run.

Regression Analysis:

While there doesn't appear to be any strong regressions, Consumer Expectations has the best link to EA's stock price, explaining 11% of the variation in the data and have P-Value of 8%. The regressions were run using quarterly data for Consumer Confidence, Consumer Expectations, GDP, and Disposable Income. Exhibit 4 gives more details on the regressions that were run. The graph below shows the scatter plot associated with the Consumer Expectations Index regression.





Appendix and Exhibits:

Income Statements:

| Fiscal Date | 2000 | 2001 | 2002 | 2003 | 2004 | 2005E | 2006E | 2007E | 2008E | 2009E | 2010E |
|--|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|
| Calendar Date | | | | | | Mar-05 | Mar-06 | Mar-07 | Mar-08 | Mar-09 | Mar-10 |
| ERTS - Statement of Consolidated Earnings (in \$mil) | | | | | | | | | | | |
| Total net revenues | 1,420 | 1,322 | 1,725 | 2,482 | 2,957 | 3,300 | 3,469 | 4,329 | 5,403 | 6,744 | 8,418 |
| Cost of goods sold from unaffiliated customers | | | | | | | | | | | |
| Group cost of goods sold | 706 | 652 | 815 | 1,073 | 1,103 | 1,331 | 1,403 | 1,751 | 2,185 | 2,727 | 3,404 |
| Total cost of goods sold | 706 | 652 | 815 | 1,073 | 1,103 | 1,331 | 1,403 | 1,751 | 2,185 | 2,727 | 3,404 |
| Gross profit | 714 | 670 | 910 | 1,409 | 1,854 | 1,969 | 2,066 | 2,578 | 3,218 | 4,017 | 5,013 |
| Operating expenses: | | | | | | | | | | | |
| Total operating expenses | 560 | 700 | 774 | 953 | 1,079 | 1,413 | 1,725 | 1,836 | 2,291 | 2,859 | 3,568 |
| Operating income (loss) | 154 | (30) | 135 | 456 | 776 | 556 | 341 | 742 | 927 | 1,158 | 1,446 |
| Interest and other income (expense), net | 16 | 17 | 13 | 5 | 21 | 31 | 31 | 31 | 31 | 31 | 31 |
| Income (loss) before provision for (benefit from) income taxes and minority interest | 170 | (13) | 148 | 461 | 797 | 587 | 372 | 773 | 958 | 1,189 | 1,477 |
| Provision for (benefit from) income taxes | 53 | (4) | 46 | 163 | 219 | 179 | 116 | 241 | 299 | 371 | 460 |
| <i>Tax rate (%)</i> | 31% | 31% | 31% | 35% | 28% | 31% | 31% | 31% | 31% | 31% | 31% |
| Income (loss) before minority interest | 117 | (9) | 102 | 298 | 577 | 408 | 256 | 532 | 659 | 818 | 1,016 |
| Minority interest in consolidated joint venture | (0) | (2) | (1) | (1) | - | - | - | - | - | - | - |
| Net income (loss) before retained interest in EA.com | | | | | | | | | | | |
| Net loss related to retained interest in EA.com | | | | | | | | | | | |
| Net income (loss) | \$ 116.75 | \$ (11.08) | \$ 101.51 | \$ 296.89 | \$ 577.29 | \$ 408.03 | \$ 256.06 | \$ 532.15 | \$ 659.35 | \$ 818.10 | \$ 1,016.24 |
| Earnings (loss) per share - Class A Stockholders | | | | | | | | | | | |
| Diluted | \$ 1.76 | \$ (0.08) | \$ 0.71 | \$ 1.01 | \$ 1.85 | \$ 1.34 | \$ 0.84 | \$ 1.75 | \$ 2.17 | \$ 2.69 | \$ 3.34 |
| Basic | \$ 1.86 | \$ (0.08) | \$ 0.74 | \$ 1.03 | \$ 1.93 | \$ 1.29 | \$ 0.81 | \$ 1.68 | \$ 2.09 | \$ 2.59 | \$ 3.22 |
| Number of shares used in diluted earnings (loss) per share computation | 66.37 | 132.06 | 143.14 | 294.11 | 312.53 | 304.08 | 304.08 | 304.08 | 304.08 | 304.08 | 304.08 |
| Number of shares used in basic earnings (loss) per share computation | 62.83 | 131.40 | 136.82 | 286.94 | 299.64 | 316.05 | 316.05 | 316.05 | 316.05 | 316.05 | 316.05 |



Balance Sheets:

| Fiscal Date | 2000 | 2001 | 2002 | 2003 | 2004 | 2005E | 2006E | 2007E | 2008E | 2009E | 2010E |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Calendar Date | | | | | | Mar-05 | Mar-06 | Mar-07 | Mar-08 | Mar-09 | Mar-10 |
| ERTS - Consolidated Balance Sheet (in \$mil) | | | | | | | | | | | |
| Assets | | | | | | | | | | | |
| Current Assets | | | | | | | | | | | |
| Cash & cash equivalents and short-term investments | 340 | 466 | 797 | 1,588 | 2,414 | 2,795 | 3,065 | 3,688 | 4,461 | 5,424 | 6,621 |
| Marketable securities | 0 | 10 | 7 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Receivables net of allowances | 234 | 174 | 190 | 82 | 212 | 338 | 355 | 443 | 553 | 691 | 862 |
| Inventories, net | 23 | 16 | 24 | 40 | 55 | 46 | 48 | 61 | 76 | 94 | 118 |
| Deferred income tax | - | - | 39 | 117 | 84 | 81 | 81 | 81 | 81 | 81 | 81 |
| Other current assets | 108 | 152 | 96 | 83 | 144 | 141 | 141 | 141 | 141 | 141 | 141 |
| Total Current Assets | 705 | 819 | 1,153 | 1,911 | 2,911 | 3,401 | 3,691 | 4,414 | 5,312 | 6,430 | 7,823 |
| Property, plant & equipment, net | 285 | 337 | 309 | 262 | 298 | 310 | 316 | 323 | 330 | 336 | 343 |
| Investment in affiliates | 23 | 19 | 19 | 20 | 14 | 15 | 15 | 15 | 15 | 15 | 15 |
| Goodwill | 171 | 196 | 69 | 86 | 92 | 93 | 93 | 93 | 93 | 93 | 93 |
| Other intangibles | - | - | 41 | 21 | 18 | 17 | 17 | 17 | 17 | 17 | 17 |
| Long-term deferred income taxes | - | - | 64 | 14 | 41 | 44 | 44 | 44 | 44 | 44 | 44 |
| Other assets | 8 | 8 | 44 | 45 | 26 | 66 | 66 | 66 | 66 | 66 | 66 |
| Total Assets | \$ 1,192 | \$ 1,379 | \$ 1,699 | \$ 2,360 | \$ 3,401 | \$ 3,946 | \$ 4,242 | \$ 4,971 | \$ 5,877 | \$ 7,002 | \$ 8,401 |
| Liabilities, Minority Interest and Stockholders Equity | | | | | | | | | | | |
| Current Liabilities | | | | | | | | | | | |
| Accounts payable | 98 | 73 | 89 | 106 | 114 | 141 | 148 | 185 | 231 | 289 | 360 |
| Accrued and other liabilities | 168 | 267 | 364 | 465 | 608 | 613 | 646 | 806 | 1,006 | 1,255 | 1,567 |
| Total Current Liabilities | 265 | 340 | 453 | 571 | 722 | 753 | 794 | 991 | 1,237 | 1,544 | 1,927 |
| Minority interest in consolidated joint venture | \$ 4 | \$ 5 | \$ 3 | \$ 4 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Stockholders Equity | | | | | | | | | | | |
| Common stock | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Paid-in-capital | 413 | 540 | 650 | 856 | 1,154 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 | 1,265 |
| Retained earnings | 516 | 505 | 607 | 924 | 1,501 | 1,908 | 2,165 | 2,697 | 3,356 | 4,174 | 5,190 |
| Accumulated other comprehensive income | (6) | (13) | (15) | 2 | 20 | 16 | 16 | 16 | 16 | 16 | 16 |
| Total Stockholders Equity | 923 | 1,034 | 1,243 | 1,785 | 2,678 | 3,193 | 3,449 | 3,981 | 4,640 | 5,458 | 6,474 |
| Total Liab., Minority Interest and S. Equity | \$ 1,192 | \$ 1,379 | \$ 1,699 | \$ 2,360 | \$ 3,401 | \$ 3,946 | \$ 4,243 | \$ 4,972 | \$ 5,877 | \$ 7,002 | \$ 8,401 |



| Fiscal Date | 2002 | 2003 | 2004 | 2005E | 2006E | 2007E | 2008E | 2009E | 2010E |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Calendar Date | | | | Mar-05 | Mar-06 | Mar-07 | Mar-08 | Mar-09 | Mar-10 |
| ERTS - Consolidated Statement of Cash Flows (in \$mil) | | | | | | | | | |
| Operating Activities | | | | | | | | | |
| Net income | \$ 102 | \$ 297 | \$ 577 | \$ 408 | \$ 256 | \$ 532 | \$ 659 | \$ 818 | \$ 1,016 |
| <i>Adjustments of reconcile net income to net cash provided by operating activities</i> | | | | | | | | | |
| Depreciation and Amortization | 111 | 92 | 78 | \$ 74 | 21 | 22 | 22 | 22 | 23 |
| Equity in net income of investment of affiliates | (3) | (5) | (1) | | | | | | |
| Non-cash restructuring and asset impairment charges | 13 | 66 | 9 | | | | | | |
| Other-than-temporary impairment of investment in affiliates | - | 11 | - | | | | | | |
| Loss on sale of PP&E and marketable equity securities | 0 | 1 | 4 | | | | | | |
| Stock based compensation | 3 | 1 | 1 | | | | | | |
| Tax benefit from exercise of stock options | 23 | 75 | 69 | | | | | | |
| Minority interest in consolidated joint venture | 1 | 1 | - | | | | | | |
| Bad debt expense | 9 | - | - | | | | | | |
| <i>Change in assets and liabilities:</i> | | | | | | | | | |
| Accounts Receivable, net | (25) | 110 | (194) | \$ (126) | (17) | (88) | (110) | (137) | (171) |
| Inventories, net | (8) | (5) | (23) | \$ 9 | (2) | (12) | (15) | (19) | (23) |
| Other assets | (2) | (31) | (67) | \$ 3 | - | - | - | - | - |
| Accounts payable | 16 | 18 | 23 | \$ 27 | 8 | 37 | 46 | 57 | 72 |
| Accrued and other liabilities | 49 | 64 | 194 | \$ 18 | 33 | 160 | 200 | 250 | 311 |
| Net cash provided by operating activities | \$ 288 | \$ 694 | \$ 669 | \$ 413 | \$ 298 | \$ 651 | \$ 802 | \$ 991 | \$ 1,227 |
| Investing Activities | | | | | | | | | |
| Capital expenditures | (52) | (59) | (90) | (33) | (28) | (28) | (29) | (29) | (30) |
| Proceeds from the sale of PP&E | 0 | 1 | 1 | | | | | | |
| Purchase of investment in affiliates | 3 | (9) | (1) | | | | | | |
| Proceeds from the sale of investment in affiliate | 1 | - | 8 | | | | | | |
| Purchase of s-term investments | (322) | (1,050) | (2,511) | (839) | | | | | |
| Proceeds from the maturities and sales of s-term investments | 132 | 660 | 2,883 | | | | | | |
| Proceeds from the sale of marketable equity securities | - | 5 | 2 | | | | | | |
| Purchase of minority interest | - | - | (3) | | | | | | |
| Distribution from investment in affiliate | - | 3 | - | | | | | | |
| Acquisition of subsidiary, net of cash required | - | (13) | (3) | | | | | | |
| Net cash provided by investing activities | \$ (238) | \$ (463) | \$ 288 | \$ (872) | \$ (28) | \$ (28) | \$ (29) | \$ (29) | \$ (30) |
| Financing Activities | | | | | | | | | |
| Proceeds from the sale of common stock through employee stock plans and other plans | 96 | 132 | 228 | | | | | | |
| Purchase of Class B common stock (or treasury stock '02) | (12) | - | (0) | | | | | | |
| Repayment of Class B notes receivable | - | 1 | 0 | | | | | | |
| Dividend to joint venture | (2) | (1) | (3) | | | | | | |
| Net cash provided by financing activities | \$ 81 | \$ 132 | \$ 225 | \$ - |
| Effects of Foreign Exchange on cash | 2 | 14 | 18 | 0 | | | | | |
| Increase (decrease) in cash | 133 | 397 | 1,200 | (459) | 270 | 622 | 774 | 962 | 1,198 |
| Beginning cash | 420 | 553 | 950 | 2,150 | 1,691 | 1,962 | 2,584 | 3,358 | 4,320 |
| Ending cash | \$ 553 | \$ 950 | \$ 2,150 | \$ 1,691 | \$ 1,962 | \$ 2,584 | \$ 3,358 | \$ 4,320 | \$ 5,518 |
| Short-term investments | 244 | 638 | 264 | 1,104 | 1,104 | 1,104 | 1,104 | 1,104 | 1,104 |
| Ending cash and short-term investments | 797 | 1,587 | 2,414 | 2,795 | 3,065 | 3,688 | 4,461 | 5,424 | 6,621 |



Exhibit 3

Domestic Expenditure at market Prices and Consumer Confidence is highlighted in yellow on the below table, with other similarly strong correlations highlighted in blue.

However even this relationship is not strong and when combined with the Regression below tells us that there is no predicative value between Consumer Confidence and Stock Return.

| <i>Economic Measure</i> ²² | <i>Correlation</i> |
|---|--------------------|
| Disposable Income Current Dollars | -0.060871357 |
| Disposable Income Chained | -0.10167966 |
| GDP percent change based on current dollars | -0.001486271 |
| GDP percent change based on chained 2000 dollars | -0.083082884 |
| Consumer Confidence Index (1985=100) Monthly | 0.104812659 |
| Consumer Confidence Index (1985=100) Quarterly | 0.232212235 |
| Present Situation Index | 0.023676729 |
| Expectations Index | 0.141771402 |
| Gross domestic product at market prices | 0.184656968 |
| Gross value added at basic prices | 0.012285944 |
| Gross domestic product at market prices | -0.105529199 |
| Gross value added at basic prices | -0.133495277 |
| Gross national disposable income at market prices | -0.138046093 |
| Domestic expenditure at market prices | 0.315913987 |
| Gross domestic product at market prices | 0.207330093 |
| Gross value added at basic prices | 0.120864314 |
| Gross domestic product at market prices | 0.056181014 |

²² Source: WRDS and The Bureau of Economic Analysis and Yahoo! Finance, and <http://www.pollingreport.com/consumer.htm>



Exhibit 4

Regressions were run on several economic variables, some more common and appropriate than others, and none of them showed any direct connection. For all variables simple regressions were run, and for other variables multi variable regressions were run.

The economic factors used were: Disposable income (current and chained), GDP (current and chained), Consumer Confidence, Consumer Expectations, Present Situations Index, Gross domestic product at market prices, Gross value added at basic prices, Gross domestic product at market prices, Gross value added at basic prices, Gross national disposable income at market prices, Domestic expenditure at market prices, Gross domestic product at market prices, Gross value added at basic prices, Gross domestic product at market prices, Gross domestic product at market prices, Gross domestic product at market prices.

The below table is a sampling of the regressions that were run. To run the regression, changes in stock price were compared to changes in each of the variables tested. Of particular note is the regression against disposable income. In our industry coverage we discussed the assumption that video game sales were not tied to disposable income. This regression is further evidence that there is no direct connection between the two.



| Description ²³ | Variables / P-Value | R ² | Significance F |
|---|---|----------------|----------------|
| Disposable income chained. | .4517 | .0103 | .4517 |
| Disposable income in current dollars. | .6529 | .0037 | .6529 |
| GDP % Change in Current | .9912 | .0000 | .9912 |
| GDP % Change Chained | .5389 | .0069 | .5389 |
| Disposable income and GDP variables. | Disp. Income Current 0.9333 Disp. Income Chained 0.9571 GDP % Change Current 0.8548 GDP % Change Chained 0.8540 | .0108 | .9667 |
| Consumer confidence index. | .2827 | .0460 | .2827 |
| Consumer Expectations index. | .0892 | .1112 | .0892 |
| Consumer Confidence and Consumer Expectations | Consumer Conf Index 0.2756 Consumer Exp. Index 0.0912 | .1550 | .1326 |
| Multiple variables collected. | Disp. Income Current 0.3283 Disp. Income Chained 0.3246 GDP % Change Current 0.3567 GDP % Change Chained 0.4694 Cons. Confidence Index 0.5422 Present Situation Index 0.4254 Expectations Index 0.7687 YBEU 0.0531 YBEX 0.2789 YBEZ 0.3959 CGCE 0.6055 YBFP 0.9700 YBFV 0.0784 YBGB 0.2996 CBGV 0.8605 IHYT 0.1994 | .3776 | .1576 |

²³ Source: WRDS and The Bureau of Economic Analysis and Yahoo! Finance, and <http://www.pollingreport.com/consumer.htm>





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