

## Consumer Electronics Primer: The Sequel

### From New Product Cycle to Replacement Cycle

- **Industry Growth Decelerates but Margin Pressures Ease.** Sales of consumer electronics across all categories rose ~6% in 2008 and are expected to fall 2.0% in 2009 due to a difficult macroeconomic backdrop and slowing product cycle. While the category continues to face gross margin pressure, the silver lining is that we expect the industry gross margin rate to contract only 36 bps in 2009, materially lower than the 80-bp headwind estimated in 2008 (largely due to less mix pressure).
- **Entering a Replacement Cycle.** While the product cycle is not dead, we don't believe 2008-2010 will measure up to the supercycle from 2002-2007 when growth averaged 10.4% (see Exhibit 3). Hence, we need to look at the category with a different lens: the new product cycle is now a replacement cycle. For the retailers, it is a question of share and how frequently consumers upgrade their existing stable of products. As a result, one headwind the category faces is a lengthening TV and computer upgrade cycle as innovation and adoption may have pulled forward demand (a moderate version of what continues to impact appliance sales).
- **Channel and Wallet Share Shift.** We forecast a 470-bp negative market share shift out of the electronics/appliance store channel, with 340 bps shifting to the mass channel and increased penetration of direct/internet purchases. Moreover, as innovation slows, the category could see lost share of the consumers' wallet, particularly as other depressed categories (home and apparel) regain spending status.
- **Circuit City: A Requiem and Its Implications.** We believe 2H08 same-store sales in the specialty channel were aided 300-500 bps as Circuit City spiraled downward. Thus, while headline sales comparisons for most retailers are numerically more difficult in 1H09, the specialty electronics players should see the greatest share lift during this period. Moreover, while comparisons do ease numerically in 2H09, the sector faces *relatively* tougher compares as they anniversary Circuit City's demise.
- **CC: It's All About TV.** The video category at Circuit City, which includes televisions, represented over 40% of revenue, with TV accounting for the majority. Arguably, it was the one category where CC challenged BBY's preeminence. Hence, we believe the benefit to other retailers will be most acute during the seasonally strong television selling periods. We've already seen a big lift in January, and the next left is June (Father's Day and the digital transition) followed by Back-to-School (mostly pre-football sales plus some notebooks). Thus, the June lift should help BBY offset difficult rebate check comparisons. Finally, we believe that the Circuit City bankruptcy will drive more benefits to smaller players.

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- **BBY Not the First Recovery Play.** Our analysis suggests consequences for Best Buy as investors look to position themselves for a consumer recovery and easy back-half sales comparisons. In addition to Best Buy anniversaring the initial Circuit City lift, the category in general never lost a lot of wallet share (see exhibit 4). Moreover, Best Buy's EBIT only fell 90 bps to 5.4% in 2008 (vs. other retailers whose profitability virtually collapsed). Consequently, the stock may suffer on a relative basis, which should continue to be manifested in a lower relative valuation (placing the stock performance squarely on potential earnings revisions/surprises, in our view). More on that at another time...
- **There's More Inside.** In this report, we also benchmark electronics to other hardlines sectors, discuss significant macro correlations, provide category level sales and margin projections, and take a deep dive into the television outlook.

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## Executive Summary

### Industry Growth Decelerates; Margin Pressures Ease

The electronics market is commonly looked at from the *wholesale level*, as this is where the data is tracked by the industry trade group, the Consumer Electronics Association (CEA). According to our forecasts, factory/wholesale sales of consumer electronics across all channels increased ~6% in 2008, representing a significant deceleration from the ~10.4% CAGR from 2002 to 2007 (*the supercycle years*). Looking at 2009, we are anticipating a 2.0% decline vs. the current CEA forecast for a 0.6% contraction. As we discuss in greater detail in “From New Product Cycle to Replacement Cycle,” we believe the market is facing contraction due to a difficult macroeconomic backdrop and a slowing product cycle.

Turning our attention from sales to gross margin dollars, we believe a negative mix shift in margins is occurring, with relatively higher sales of lower-margin products (e.g., electronic gaming) and the impact of inexorable product margin contraction. While the category continues to face pressure, the silver lining is that we expect the industry gross margin rate to contract 36 bps in 2009, materially lower than the 80-bp headwind estimated in 2008 largely due to less mix pressure.

### Discounters and On-line Thrive as Products Commoditize

From the channel side, it is important to understand the path of the share shifts over the 2001-2007 timeframe. In our view, the combination of the economic recovery out of 2001 and the acceleration in the product cycle caused a significant shift to the specialty channel (as specialty stores drive the consumer education process and distribution tends to be limited due to price points and more narrow appeal). These factors also drove share away from the mass channel. For example, in 2001, the mass channel had a healthy 29.5% share but this fell to 25.4% in 2004 as the economy and product adoption accelerated. However, from 2005-2007, the mass channel regained share to 28.2% as production expanded and price points fell significantly (e.g., TVs, laptops, cameras, etc).

As prices become more appropriate to the mass consumer, Wal-Mart becomes a more relevant player. In 2008, the company heavily invested in the flat panel category with an expanded assortment and more national brands (e.g., Sony and Samsung). By no coincidence, prices on sub-42” TVs fell below \$1000. This has also been aided by a recession-plagued consumer and a push by manufacturers to find channels to displace significant volumes (due to over-supply and Circuit City). Wal-Mart even has the iPhone now. Finally, we note that the internet channel becomes increasingly relevant for many of the same reasons.

*For the 2007 to 2010 timeframe, we forecast a 470-bp negative share shift, as a percent of total sales, out of the total electronics/appliance store channel. The three largest factors include: 1) 340 bps related to a shift to the mass channel; 2) more direct/internet purchases; and 3) the liquidation of Circuit City. The largest market share shift is projected in 2009 (due to the liquidation of Circuit City). For 2010, we expect more normalized (e.g., 50-100 bps per year) shifts in market share as*

*commoditization and retail bankruptcies abate, and retail square footage rebalances with demand.*

## Share of Wallet Shift Could Hurt Electronics

Moreover, we believe that the slowing cycle has important share of wallet implications. For the past decade, consumer electronics sales have outpaced other sectors due to tremendous product innovation. Going forward, less innovation suggests a smaller portion of the consumers' budget being allocated to the category, and we expect other categories to regain spending status. The categories hit the hardest in the past four years: home improvement and home furnishings; it's tough not to expect some mean reversion...

## Circuit City: A Requiem and Its Implications

### Conclusion #1: CC Lift Largest in 1H; Oddly Difficult Compares in 2H

Looking at the time line of Circuit City's demise, we see a few important observations.

- First, the initial 155 store closings announced on September 29th were designed to drive cash to improve in-stocks for the holiday season. However, the company was unable to generate sufficient liquidity during October and was forced by vendors to file Chapter 11 on November 10th.
- Second, this suggests that the company's in-stock position was low during back to school (inventories were down 18% YOY for the quarter ending August 31st), making Circuit City open prey for Best Buy. Inventory quality only deteriorated into the all-important holiday season as vendors tightened terms and forced Chapter 11. *Indeed, we believe CC comped down ~30-40% in 3Q and Circuit City's inventory was down ~50% from the previous year at the end of November.*
- Finally, lest we forget that the last time CC comped positively was in the quarter ending November 2006... it has been donating share for a long time.

Hence, we believe 2H08 same-store sales in the specialty channel were aided 300-500 bps as Circuit City spiraled downward. Thus, while headline sales comparisons for most retailers are numerically more difficult in 1H09, the specialty electronics players should see the greatest share lift during this period. Moreover, while comparisons do ease numerically in 2H09, relative to other retailers, the sector faces tougher compares (vs. other discretionary retailers) as it anniversaries Circuit City's demise.

### Conclusion #2: TV Was and Is THE Opportunity

In our opinion, Circuit City was strong at selling one particular product: televisions. The video category at Circuit City, which includes televisions, represented over 40% of revenue, and we believe that TV accounted for the majority. Accordingly, we believe the benefit to other retailers will be most acute during the seasonally strong television selling periods, including the just passed January seasonal peak. We believe Best Buy experienced strength in January due to the holiday selling season, college bowl series and Superbowl. Also, specialty retailers benefited from CC's going out of business advertising (with poor TV in-stocks) and the confusion over the DTV transition.

*Recent checks suggest that demand may have been pulled forward leading to softness in the past few months. The next lift is June (Father's Day) and Back-to-School (mostly pre-football sales plus some notebooks). All remaining full-power television stations still broadcasting in analog will make the transition to all-digital between April 16 and June 12. As of the completion of this report, 62% of stations had yet converted. Thus, the June lift to sales should be substantial.*

For BBY, we extrapolate that it grabs 35% of the remaining sales from Circuit City (we discount them 20%). While Best Buy controls about a quarter of the market, we believe that it is most likely to experience a 35% sales lift considering that Circuit City was often the "second shop" after Best Buy, and due to its generally poor real estate locations. We expect the sales flow through would be at a mid-20s EBIT rate. As such, our most likely case yields a \$0.67 lift to BBY's EPS. However, we believe approximately 20% of the benefit (or \$90MM in EBIT) was received in the fourth quarter of fiscal 2009. Finally, we believe that the CC bankruptcy will drive more benefits to smaller players.

### From New Product Cycle to Replacement Cycle

CE retailers often speak of the adoption rate of a new product "hitting the sweet spot." We believe that this occurs during the early majority stage of adoption under the standard S Adoption curve (i.e., during the time when penetration rises from 16% to the low 40% of households). After this point, commoditization sets in and "higher end" price points become sensible for sales in the mass channel.

Looking at the household penetration of the major product categories (see exhibit 18); we can see that we are well into the commoditization phase for many of the largest categories.

- DTVs had a 62% household penetration in January 2009, according to the CEA, which is significant, given the category represents approximately 15% of the market.
- Notebooks, which have been a big driver of growth had a penetration of 53%. Moreover, the adoption of netbooks is placing significant pressure on ASPs. Retailers had hoped that this was a "second laptop" for consumers. It looks to be turning out to be a replacement product.
- MP3 players and gaming consoles are both at 46% penetration, while digital cameras and wireless phones are at 77% and 90%, respectively.
- The most appealing growth opportunities are smartphones and navigation devices (both below 25% penetration).

*The point is that the 2000s have witnessed a breathtaking pace of innovation and adoption. However, we don't believe 2008-2010 will measure up to the supercycle from 2002-2007 when growth averaged 10.4% (see Exhibit 3). Hence, we need to look at the category with a different lens: the new product cycle is now a replacement cycle. For the retailers, it is a question of share and how frequently consumers upgrade their existing stable of consumer electronics products.*

We believe it is noteworthy to reflect on the appliance category as a gauge on what the future may hold for different categories. During the peak of the housing boom, we believe that the major appliance replacement cycle (i.e., the period between new purchases) fell to ~7 years from a historical average of 12-14 years. Innovation (e.g., stainless steel, colors, front load, high efficiency) combined with the credit-fueled housing boom pulled forward 5-7 years of demand. This suggests that appliances should see below-trend sales growth to as late as 2012. While one could argue that innovation in this category remains solid, the pace of change and lack of easy credit are significant.

Electronics experienced a similar acceleration in innovation and easy money environment (and can be similarly big ticket and credit dependent). Below we summarize our view of the peak in product churn and direction of the replacement period for major CE categories.

Exhibit 1. Replacement Cycle Outlook (years, except as noted)

Category	Historic Average	Peak	Current	Direction
Major Appliances	12-14	7	10-12	Lengthening
Televisions	7	4	4	Lengthening
Computers	4	3	3-3.5	Slightly Lengthening
Wireless Phones	14-18 Months	14	14-15	Accelerating
MP3 Players	3	3	3	Constant

Source: J.P. Morgan estimates.

- For televisions, the mass adoption of flat-panel models has driven peak replacement periods. However, given a 62% household penetration of digital TVs at the end of 2008, the looming June digital transition deadline, and flattening of the innovation curve, we expect the replacement period to lengthen. While not reaching the historical average of seven years, we are nonetheless heading in the other direction.
- For computers, the largest consumer electronics category, replacement rates have been consistently between 3 to 4 years. Over the last few years, replacement periods fell to the low 3s as affordability, mobility, and new operating systems drove interest in the category. Microsoft's new operating system will probably drive sales when it is released (likely in early 2010), but we expect laptop sales to slow from their recent breathtaking pace and don't view netbooks as transformational.
- For wireless phones, replacement rates are generally in line with average contract life. However, the casual consumer adoption of new smartphones and the iPhone has led to acceleration in replacement rates. This category is one of the best positioned as this trend should continue (although stopped out by the minimum one year post-paid contract term).
- For MP3 players, replacement periods have fallen as penetration reached into the 40% of household range. As such, we believe that the current three year cycle should remain relatively constant. Innovation from Apple could significantly change this outlook, however.

*Thus, in our view, the real at-risk categories from a demand pull forward perspective are TVs and PCs/notebooks (these represent an estimated 40% or more of sales at Best Buy), in addition to appliances (6% of revenues).*

### **BBY Not the First Choice Recovery Play**

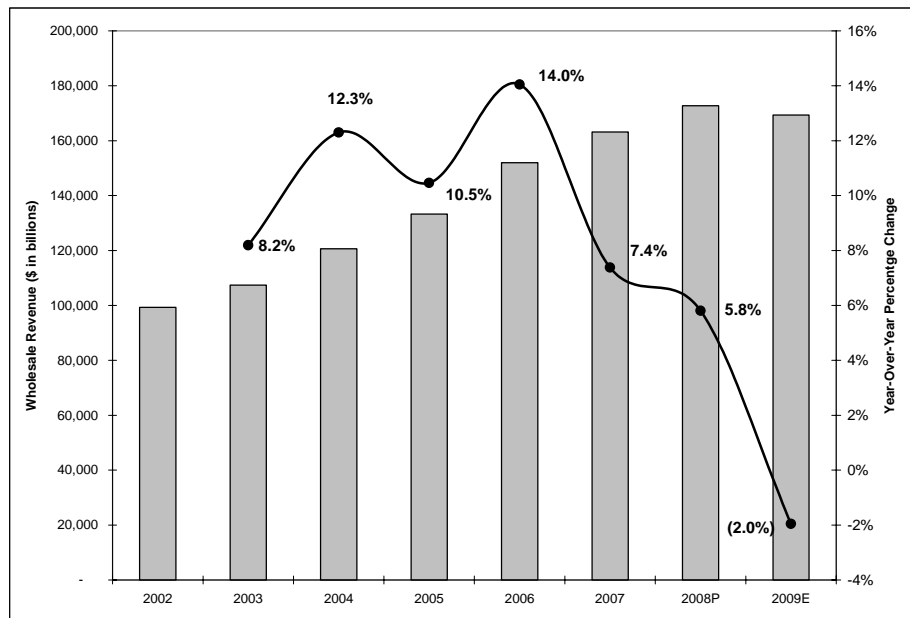
The conclusions reached above suggest consequences for Best Buy as investors look to position themselves for a consumer recovery and easy back-half sales comparisons. In addition to Best Buy anniversarying the initial CC lift making for relatively tougher sales compares, the category in general never lost a lot of wallet share (vs. home or apparel, see Exhibit 4). Moreover, Best Buy's EBIT only fell 90 bps to 5.4% in 2008 (vs. other retailers whose profitability virtually collapsed). Hence, the stock may suffer on a relative basis, which should continue to be manifested in a lower relative valuation (placing the stock performance squarely on potential earnings revisions/surprises).

## Sizing the Market

### \$173 Billion at Wholesale

The electronics market is commonly looked at from the *wholesale level*, as this is where the data is tracked by the industry trade group, the Consumer Electronics Association (CEA). According to our forecasts, factory sales of consumer electronics *across all channels of distribution* rose approximately 5.8% in 2008, to \$173 billion, representing a deceleration from stronger growth in previous years. Indeed, factory sales grew at a CAGR of ~10.4% from 2002 to 2007. Looking at 2009, we are anticipating a 2% decline to \$169 billion, which is below the current CEA forecast for a 0.6% contraction. As we discuss in greater detail in the “From New Product Cycle to Replacement Cycle” section, we believe the consumer electronics market is facing contraction due to the difficult macroeconomic backdrop and a decelerating digital product cycle.

Exhibit 2. Total Factory Sales of Consumer Electronics (\$ in billions)

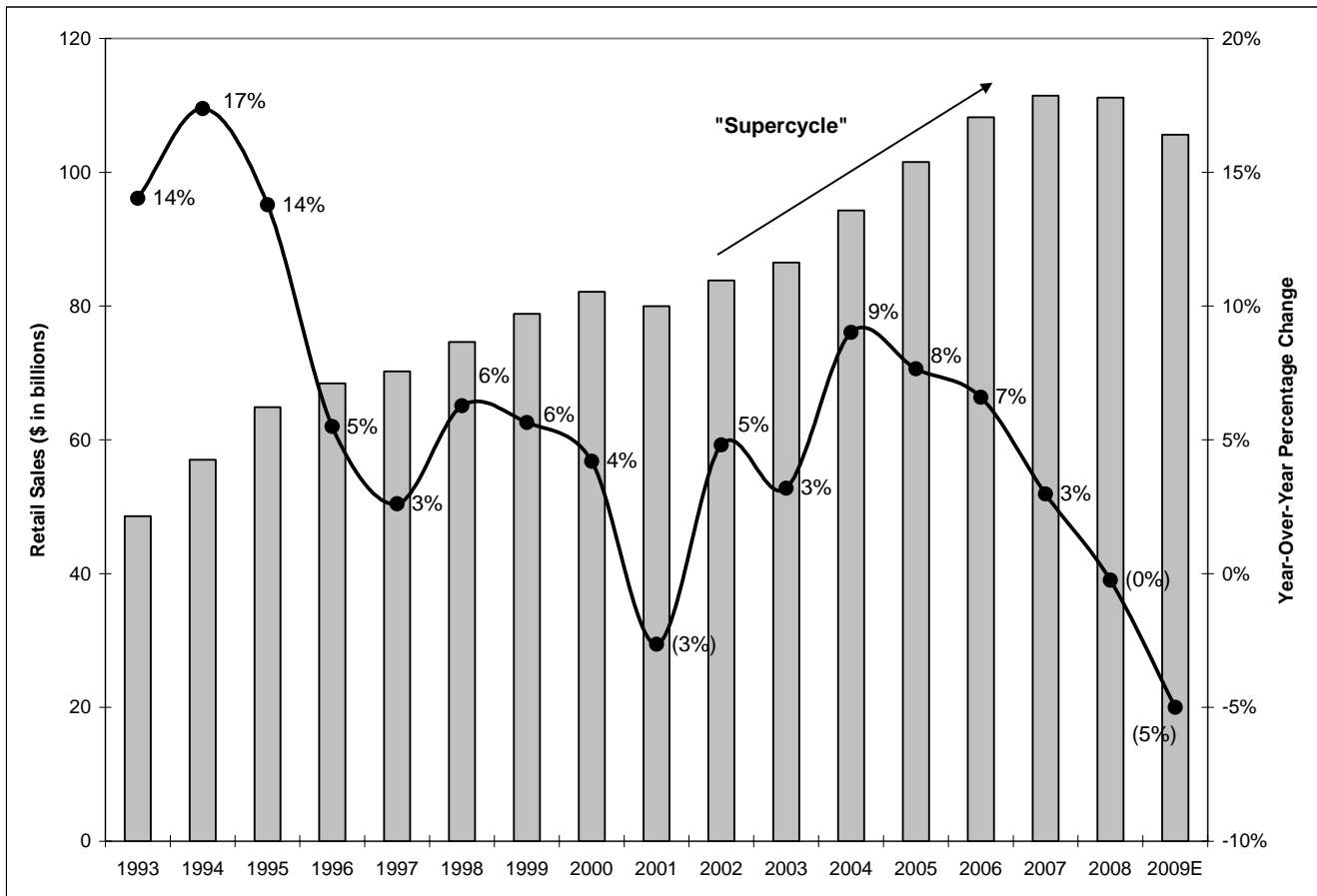


Source: Consumer Electronics Association; J.P. Morgan estimates.

### Retail Sales Turn Negative

We focus on factory sales because they provide a broad perspective by capturing sales in all channels. However, for a look at retail trends, including how share may be shifting, the Census Bureau reports sales at consumer electronics and appliance stores (a close benchmark to Best Buy). As indicated below, retail sales at U.S. electronics and appliance stores declined modestly in 2008, following 3.0% and 6.6% growth in 2007 and 2006, respectively. Similar to the trend in factory sales, we expect revenues to contract roughly 5% in 2009. We believe the disparity in growth rates (wholesale versus retail) results from Circuit City’s bankruptcy, share shifting out of this channel, and our view that appliance sales growth will continue to lag that of electronics.

Exhibit 3. Retail Sales & Growth – Electronics and Appliances Stores Only (\$ in billions)



Source: U.S. Census Bureau; J.P. Morgan estimates.

### Attractive 4-5% Growth, But For Whom?

While it is at a slower pace than what we've seen prior to 2008, we expect the longer-term *wholesale level* industry growth to average a healthy 4%-5% (ahead of the growth in the overall economy) as electronics become further entrenched in every day life. *The bigger question is who the prime retail beneficiaries are from this above-average growth.* In our view, CC's liquidation was symptomatic of both macro trends and the slowing product cycle. We believe that we are about two years into a product replacement cycle that could last for another two to three years. This represents a dramatic shift from 2002-2007, which featured the initial adoption of eight new/innovative/big ticket products: flat panel TVs, laptops, broadband/wireless home networks, digital cameras, MP3 players, smart phones, video gaming, and GPS. *We believe that Best Buy will remain a dominant player, but the fastest growers in this category are more likely to originate in the discount and online channels.*

### Slowing Innovation = Channel and Wallet Share Shift

As indicated in the exhibit below, as a percentage of total retail sales and food services ex autos, electronics and appliance store sales declined for the third straight year to 3.0% in 2008 compared to its peak of 3.5% in 1996. This metric is likely to

experience a noteworthy hit in 2009 now that Circuit City has liquidated, but other channels are also taking share. Moreover, we believe that the slowing product cycle has important share of wallet implications. For the past decade, consumer electronics sales have outpaced other sectors due to tremendous product innovation (see the previous two charts). Going forward, less innovation suggests less of the consumers' budget being allocated to this product category. The categories hit the hardest in the past four years: home improvement and home furnishings.

Exhibit 4. Category Sales as a Percentage of Total Retail Sales ex Autos

	1993	1994	1995	1996	1997	1998	1999	2000	93-'00
General Merchandise	15.8%	15.9%	16.0%	15.9%	16.0%	16.2%	16.3%	16.1%	39
Food & Beverage	22.3%	21.5%	20.9%	20.3%	19.7%	19.2%	18.7%	17.8%	(448)
Home Improvement	8.4%	8.8%	8.8%	8.9%	9.2%	9.3%	9.4%	9.2%	83
Clothing & Accessory	7.4%	7.2%	7.0%	6.9%	6.8%	6.9%	6.9%	6.7%	(71)
Furniture & Home Furnishings	3.3%	3.4%	3.4%	3.4%	3.5%	3.6%	3.6%	3.7%	36
Electronics & Appliance	2.9%	3.2%	3.5%	3.5%	3.4%	3.4%	3.4%	3.3%	41
Sporting Goods, Books, Hobby	3.1%	3.2%	3.2%	3.2%	3.1%	3.2%	3.1%	3.1%	(4)
Other	36.8%	36.9%	37.2%	37.8%	38.3%	38.2%	38.6%	40.1%	324
Census Sales and Food Services Ex. Autos	100%	100%	100%	100%	100%	100%	100%	100%	

	2001	2002	2003	2004	2005	2006	2007	2008	01-'08
General Merchandise	16.6%	16.9%	16.9%	16.7%	16.4%	16.2%	16.2%	16.3%	(38)
Food & Beverage	18.1%	17.6%	17.2%	16.6%	16.1%	15.7%	15.7%	16.1%	(200)
Home Improvement	9.3%	9.4%	9.5%	10.0%	10.2%	10.1%	9.4%	8.9%	(45)
Clothing & Accessory	6.5%	6.5%	6.4%	6.4%	6.3%	6.3%	6.3%	6.1%	(47)
Furniture & Home Furnishings	3.6%	3.6%	3.5%	3.5%	3.5%	3.5%	3.3%	3.0%	(58)
Electronics & Appliance	3.1%	3.2%	3.1%	3.2%	3.2%	3.2%	3.1%	3.0%	(8)
Sporting Goods, Books, Hobby	3.0%	2.9%	2.8%	2.7%	2.6%	2.5%	2.5%	2.4%	(59)
Other	39.8%	39.9%	40.5%	40.9%	41.7%	42.6%	43.4%	44.3%	455
Census Sales and Food Services Ex. Autos	100%	100%	100%	100%	100%	100%	100%	100%	

Source: U.S. Census Bureau; Consumer Electronics Association; J.P. Morgan estimates.

According to TWICE Market Research, in 2007 consumer electronics sales (excluding appliances) from the top 100 CE retailers rose 9.8% in 2007, to \$125.4 billion, driven by strong CE sales growth from the mass channel (up 20%), consumer direct - internet and catalog (up 13%), and total electronics/appliance stores (up 6%). Note, the data for 2008 is expected to be published in May.

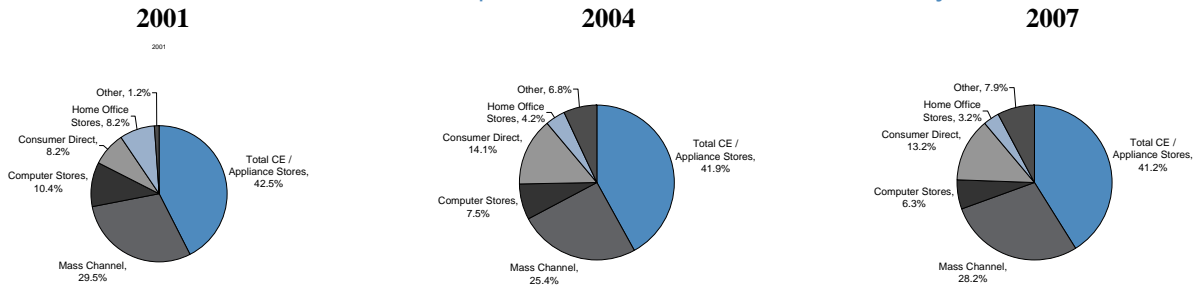
Exhibit 5. Top 100 CE Retailers - Revenue by Retail Channel (\$ in billions)

Retail Channel	2002	2003	2004	2005	2006	2007
Electronics/Appliance Stores	\$23.9	\$22.9	\$22.9	\$24.5	\$27.2	\$30.1
Electronics-Only Stores	12.6	16.8	18.2	20.2	21.6	21.5
Total CE/Appliance Stores	36.5	39.7	41.0	44.7	48.8	51.6
Mass Channel	24.9	23.6	24.8	28.2	29.4	35.4
Computer Stores	8.1	9.3	7.3	7.1	8.3	7.9
Consumer Direct	7.1	10.2	13.8	14.7	14.7	16.6
Home Office Stores	6.8	3.7	4.1	4.2	4.0	4.1
Other	1.2	3.1	6.7	7.4	8.9	9.8
<b>Top 100 Total</b>	<b>84.6</b>	<b>89.6</b>	<b>97.8</b>	<b>106.2</b>	<b>114.2</b>	<b>125.4</b>
<i>Growth</i>	<i>5.2%</i>	<i>5.9%</i>	<i>9.2%</i>	<i>8.6%</i>	<i>7.5%</i>	<i>9.8%</i>

Source: TWICE; Consumer Electronics Association; J.P. Morgan estimates.

As indicated in the exhibits below, electronic and appliance stores accounted for 41% of the market followed by the mass channel at 28%. The former includes companies like Best Buy, while the latter incorporates the likes of Wal-Mart, Costco, and Target. Please note that this distribution analysis excludes appliance sales.

Exhibit 6. Top 100 Consumer Electronics Retailers — Sales by Distribution Channel



Source: TWICE; Consumer Electronics Association; J.P. Morgan estimates.

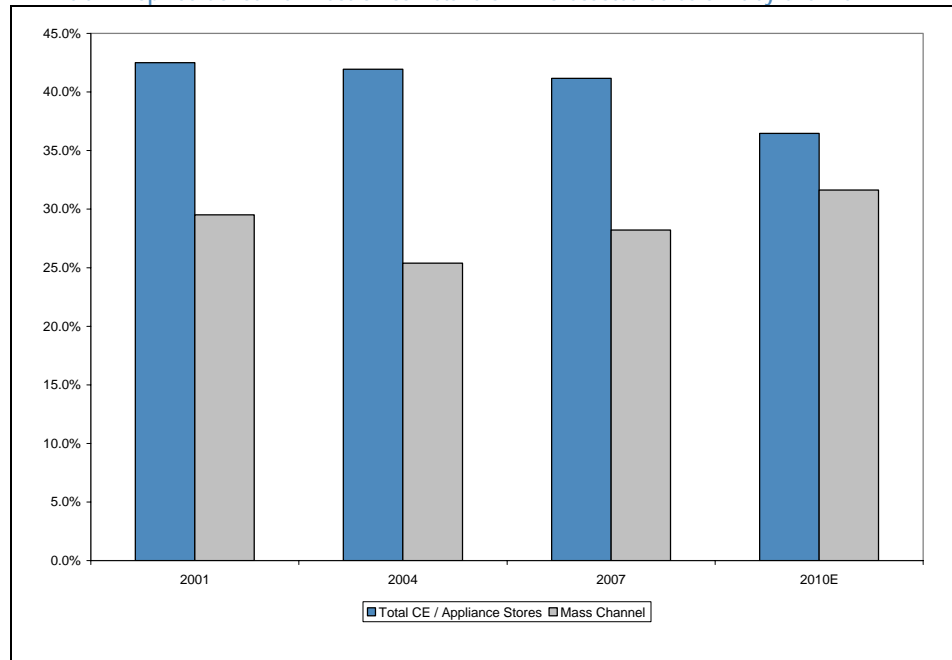
### Share Shift Follows the Product Cycle

It is important to understand the path of the share shifts over the 2001-2007 timeframe. In our view, the combination of the economic recovery out of 2001 and the acceleration in the product cycle caused a significant shift to the specialty channel (as specialty stores drive the consumer education process and distribution tends to be limited due to price points and more narrow appeal). These factors also drove share away from the mass channel. For example, in 2001, the mass channel had a healthy 29.5% share but this fell to 25.4% in 2004 as the economy and product adoption accelerated. However, from 2005-2007, the mass channel regained share to 28.2% as production expanded and price points fell significantly (e.g., TVs, laptops, cameras, etc).

As prices become more appropriate to the mass consumer, Wal-Mart becomes a more relevant player. In 2008, the company heavily invested in the flat panel category with an expanded assortment of larger LCD displays and more national brands (e.g., Panasonic, Sony, and Samsung). By no coincidence, prices on sub-42" TVs fell below \$1000. This has also been aided by a recession-plagued consumer and a push by manufacturers to find channels to displace significant volumes (due to over-supply and Circuit City). Wal-Mart even has the iPhone now. Finally, we note that the internet channel becomes increasingly relevant for many of the same reasons (and its share is also rising).

For the 2007 to 2010 timeframe, we forecast a 470-bp negative share shift, as a percent of total sales, out of the total electronics/appliance store channel. The three largest factors include: 1) 340 bps related to a shift to the mass channel; 2) more direct/internet purchases; and 3) the liquidation of Circuit City. The largest market share shift is projected in 2009 (due to the liquidation of Circuit City). For 2010, we expect more normalized (e.g., 50-100 bps per year) shifts in market share as commoditization and retail bankruptcies abate, and retail square footage rebalances with demand.

Exhibit 7. Top 100 Consumer Electronics Retailers — Forecasted Sales Shift by Channel



Source: TWICE; Consumer Electronics Association; J.P. Morgan estimates.

Specialty retailers have focused on services and deeper/higher-end assortments to keep a distance between themselves and Wal-Mart. However, the delta between the assortments has shrunk and the adoption of higher-end models (including larger screen size TVs) has experienced increased resistance (e.g., the 65" TV is not the next 42" TV). Finally, as we discuss in the "From New Product Cycle to Replacement Cycle" section, the strength of the cycle now resides in products that are less service oriented (gaming, GPS, smartphones and netbooks), making attachments more difficult.

#### Closer Look at the Top Ten: BBY and WMT Dominate

The exhibit below ranks retail companies by consumer electronics revenue. Best Buy and Wal-Mart continued to hold the top spots in 2007, and we expect this trend to continue. Also, Circuit City closed all of its doors on March 8th. Costco jumped into the sixth spot as commoditization has shifted sales to the discount channel. Moreover, Apple Stores continued an impressive upward trend with strong Apple products (e.g., computers, iPods, and iPhones). However, RadioShack dropped a spot as the retailer continues to search for its niche in the competitive industry, while Comp USA liquidated all of its remaining locations.

Exhibit 8. Top 100 Consumer Electronics Retailers — Company Rankings by Revenue

Rank	2000	2001	2002	2003	2004	2005	2006	2007
1	Best Buy	Best Buy	Best Buy	Best Buy	Best Buy	Best Buy	Best Buy	Best Buy
2	Circuit City	Circuit City	Wal-Mart	Wal-Mart	Wal-Mart	Wal-Mart	Wal-Mart	Wal-Mart
3	Sears	Wal-Mart	Circuit City	Circuit City	Circuit City	Circuit City	Circuit City	Circuit City
4	CompUSA	RadioShack	Dell	Dell	Dell	Dell	Dell	Dell
5	RadioShack	Target	Target	Target	RadioShack	RadioShack	Target	Target
6	Wal-Mart	CompUSA	RadioShack	RadioShack	Target	Target	RadioShack	Costco
7	Target	Staples	CompUSA	Staples	Sears	CompUSA	Game Stop	Game Stop
8	Staples	Sears	Staples	CompUSA	CompUSA	Costco	CompUSA	Apple Stores
9	Office Depot	Office Depot	Sears	Sam's Club	Costco	Sears	Costco	RadioShack
10	Kmart	Kmart	Office Depot	Office Depot	Sam's Club	Sam's Club	Apple Stores	Sears

Source: TWICE; Consumer Electronics Association; J.P. Morgan estimates.

## A Requiem for a Retailer – Circuit City

- On September 29, 2008, CC announced the closing of 155 stores (out of 705 superstores) and publicly put all strategic options on the table. These stores generated \$1.4B sales in 2007 and were unprofitable after allocated marketing spend. There were 55 affected markets with 12 complete market exits (10 of them single store markets). The large markets that were either all together exited or cut back significantly were KC, Phoenix, Atlanta and Cleveland. Store liquidation sales began November 5th and were generally finished prior to Christmas.
- On November 10, 2008, CC filed for Chapter 11 bankruptcy protection as vendors increased pressure and liquidation sales failed to generate desired cash levels.
- At November 30, 2008, the end of its third fiscal quarter, CC had approximately \$1.33B of inventory down nearly 50% from \$2.59B in the year prior. Since we believe CC was on very tight terms, one could roughly say that \$545MM of inventory was sold in December.
- At December 31, 2008, CC had \$1.14B of inventory, while on January 31st, 2009, CC had only \$785MM of inventory (vs. \$1.57B in the prior year).
- On January 16, 2009, CC announced the liquidation of its remaining 567 U.S. stores after failing to broker a deal with two interested parties (bids were on the table, but key vendors on the bankruptcy Credit Committee balked at giving more time for due diligence).
- On March 8th, 2009, CC closed all of its doors. Thus, CC essentially liquidated \$785MM of inventory in two months.

### Conclusion #1: CC Lift Largest in 1H; Oddly Difficult Compares in 2H

Looking at the time line of Circuit City's demise, we see a few important observations.

- First, the initial 155 store closings were designed to drive cash to improve in-stocks for the holiday season. However, the company was unable to generate sufficient liquidity and was forced to file Chapter 11 (with vendors pushing at their backs).
- Second, this suggests that the company's in-stock position was low during back to school (inventories were down 18% YOY for the quarter ending August 31st), making Circuit City open prey for Best Buy. Inventory quality only deteriorated into the all-important holiday season as vendors tightened terms. *Indeed, we believe CC comped down ~30-40% in 3Q and, as seen above, Circuit City's inventory was down ~50% from the previous year at the end of November.*

- Finally, lest we forget that the last time CC comped positively was in the quarter ending November 2006... it has been donating share for a long time.

Hence, we believe 2H08 same-store sales in the specialty channel were aided 300-500 bps as Circuit City spiraled downward. Thus, while headline sales comparisons for most retailers are numerically more difficult in 1H09, the specialty electronics players should see the greatest share lift during this period. Moreover, while comparisons do ease numerically in 2H09, relative to other retailers, the sector faces tougher compares (vs. other discretionary retailers) as they anniversary Circuit City's demise.

### Conclusion #2: TV Was and Is THE Opportunity

In our opinion, Circuit City was strong at selling one particular product: televisions. The video category at Circuit City, which includes televisions, represented over 40% of revenue and we believe that TV accounted for the majority. Information technology (e.g., notebooks) was the second most meaningful category at roughly 25% of sales. While CC was making strides in notebooks as a part of its *fire*dog efforts, it was arguable earlier in its emphasis on TV and had a much more competitive assortment compared to Best Buy.

Accordingly, we believe the benefit to other retailers will be most acute during the seasonally strong television selling periods, including the just passed January seasonal peak. We believe Best Buy experienced strength in January due to the holiday selling season, college bowl series and Superbowl. Also, specialty retailers benefited from CC's going out of business advertising (with poor TV in-stocks) and the confusion over the DTV transition. All reasons why the biggest share shift could be behind us. Recent checks suggest that demand may have been pulled forward, leading to softness in the past few months.

*Next lift is June (Father's Day) and Back-to-School (mostly pre-football sales plus some notebooks). All remaining full-power television stations still broadcasting in analog will make the transition to all-digital between April 16 and June 12. As of the completion of this report, 62% of stations had yet converted. Thus, the June lift to sales should be substantial.*

### Conclusion #3: Smaller Players Should See a Bigger Lift

In the exhibit that follows, we take a more granular look at some of the more relevant specialty electronics retailers in the consumer electronics market.

Exhibit 9. A Look at the Market — Public Consumer Electronics Retailers, Calendar 2004-09E (\$ in billions)

Company	2004	2005	2006	2007	2008P	2009E
BBY Revenues <sup>(1)</sup>	\$24.6	\$27.4	\$31.0	\$33.3	\$35.1	\$35.5
% Change	NM	11%	13%	7%	5%	1%
% of Market	21%	21%	22%	22%	23%	24%
Store Count <sup>(3)</sup>	548	608	668	742	822	923
CC Revenues <sup>(1)</sup>	\$10.0	\$11.0	\$11.9	\$11.1	\$7.6	\$0.0
% Change	1.6%	10%	8%	(6%)	(32%)	NM
% of Market	8%	8%	9%	7%	5%	0%
Store Count <sup>(3)</sup>	518	560	592	539	364	0
RSH Revenues	\$4.8	\$5.1	\$4.8	\$4.3	\$4.2	\$4.3
% Change	4.1%	5%	(6%)	(11%)	(1%)	2%
% of Market	4%	4%	3%	3%	3%	3%
Store Count <sup>(3)</sup>	5,046	4,981	4,467	4,447	4,653	4,653
HGG Revenues <sup>(2)</sup>	\$0.8	\$0.9	\$1.1	\$1.3	\$1.4	\$1.5
% Change	6.6%	12%	18%	19%	10%	8%
% of Market	1%	1%	1%	1%	1%	1%
Store Count <sup>(3)</sup>	58	67	77	91	110	125
<b>Total Retail Market</b>	<b>\$119.4</b>	<b>\$130.3</b>	<b>\$139.3</b>	<b>\$150.4</b>	<b>\$151.2</b>	<b>\$145.1</b>
<b>% Change</b>	<b>8.9%</b>	<b>9.1%</b>	<b>6.9%</b>	<b>8.0%</b>	<b>0.5%</b>	<b>(4.0%)</b>

(1) Domestic sales only – including appliances.

(2) HGG represents First Call consensus forecasts.

(3) Domestic store count.

Source: Company reports; First Call; J.P. Morgan estimates.

We believe that retailers such as HGG and large private players (e.g., Frye’s and PC Richards) stand to benefit the most from CC’s liquidation. *First*, they tended to have at least a one-to-one ratio of stores vs. CC in their markets (vs. BBY, which had 200 more locations than CC). *Second*, they generally focus on the experience vs. just selling on price – an attractive proposition for vendors like Sony and Samsung. *Third*, BBY controls approximately a quarter of the market and manufacturers will likely be wary of making BBY even more of a giant. The same concern is true for Wal-Mart and Costco. Thus, vendors should be motivated to offer favorable terms and allotments to the smaller specialty stores (which can be relatively more meaningful to their financial results).

### Best Buy’s Share Take

We believe that CC exited 2008 with about \$8B of total domestic sales. In determining the share shift, we estimate that roughly 20% of CC’s volume simply vanishes as the stores and advertising were creating some level of demand.

For BBY, we extrapolate that it takes 35% of the remaining sales from Circuit City. While Best Buy controls about 24% of the market, we believe that it is most likely to experience a 35% sales lift considering that Circuit City was often the “second shop” after Best Buy, and due to its generally poor real estate locations. In the chart below,

we lay out three scenarios with differing sales and EBIT flow through assumptions. Also, we expect the sales flow through would be at a mid-20s EBIT rate due to the incremental sales leverage with relatively no additional costs.

As such, our most likely case yields a \$0.67 lift to BBY's EPS. However, we believe approximately 20% of the benefit (or \$90MM in EBIT) was received in the fourth quarter of fiscal 2009 and the remainder should accrue to FY10 results.

**Exhibit 10. Circuit City Store Closures – Best Buy Market Share and EPS Analysis**

\$ in millions, except per share data

	<b>Worst Case</b>	<b>Likely Case</b>	<b>Best Case</b>
CC 2008E Sales	8,000	8,000	8,000
Demand Destruction	20%	20%	20%
Sales Available	6,400	6,400	6,400
BBY Share	25%	35%	45%
Revenue Flowthrough	1,600	2,240	2,880
<b>Total Comp Lift</b>	<b>3.6%</b>	<b>5.0%</b>	<b>6.4%</b>
EBIT Flowthrough	15%	20%	25%
EBIT \$	240	448	720
Tax Effect	151	282	454
<b>BBY EPS Benefit</b>	<b>\$0.36</b>	<b>\$0.67</b>	<b>\$1.07</b>

Source: Company reports; J.P. Morgan estimates.

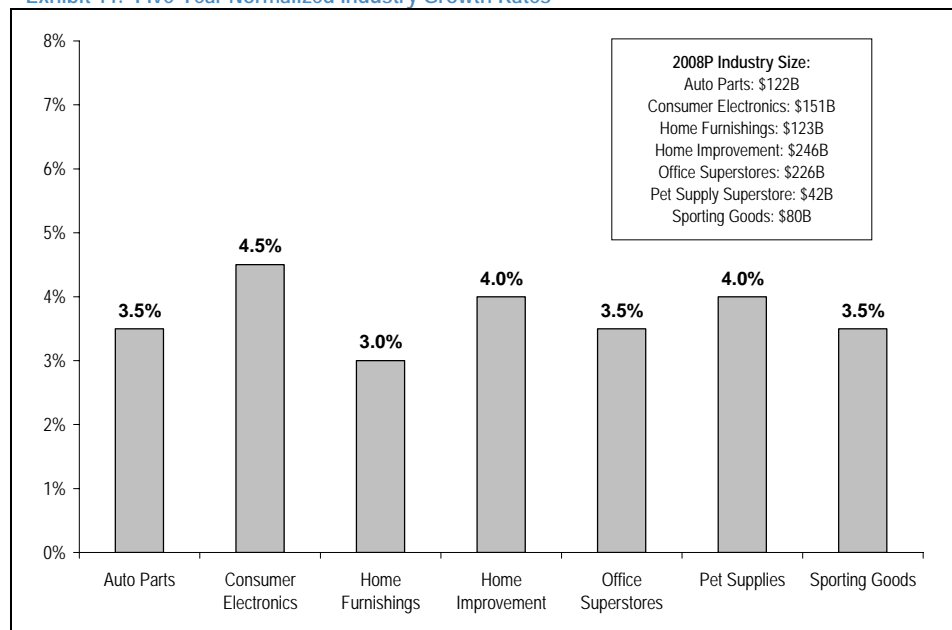
**What the Requiem Means for Best Buy**

The conclusions reached in this section suggest consequences to Best Buy as investors look to position themselves for a consumer recovery and easy back-half sales comparisons. In addition to Best Buy anniversarying the initial CC lift, making for relatively tougher compares to other retailers, the category in general never lost a lot of wallet share (vs. home or apparel, see Exhibit 4). Moreover, Best Buy's EBIT only fell 90 bps to 5.4% in 2008 (vs. other retailers whose profitability virtually collapsed). Hence, the stock may suffer on a relative basis, which should continue to be manifested in a lower relative valuation (placing the stock performance squarely on potential earnings surprises).

## Benchmarking CE Against Other Industries

Taking a step back, we think it is useful to look at the electronics market against its hardline peers to compare size, growth rate, and concentration, and to highlight the challenges of being a consumer electronics retailer. The exhibit below illustrates our expectations that the consumer electronics industry should grow faster than comparable hardline industry categories. However, in the near term, we do believe that we are in a slower growth period (with the exception of the autoparts retailers, which are in secular upswing).

Exhibit 11. Five-Year Normalized Industry Growth Rates



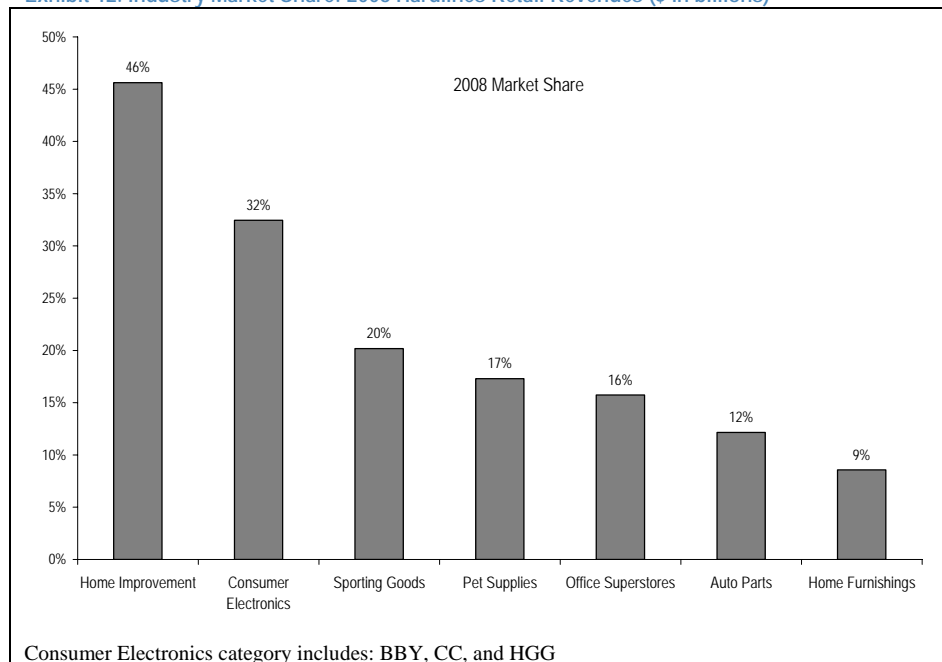
Source: Company reports; J.P. Morgan estimates.

### More Concentrated than Other Sectors

We believe it is important to understand the relative market share traditional big box retailers hold in different industries to get a sense of where penetration potentials might lie. Based on industry data and our estimates, in 2008, we estimate hardline consumer electronics retailers accounted for approximately 32% of the market. This compares to roughly 17%, and 16%, respectively, for the big box retailers we follow in the pet and office segments. However, the concentration is below the 46% market share we estimate for the home improvement channel.

In 2008, we estimate Best Buy accounted for ~23% of the consumer electronics market. Circuit City had as much as 9-10% market share in 2006; however, it began donating market share starting in the beginning of 2007. For 2009, we project Best Buy's domestic market share will increase to 24-25%.

Exhibit 12. Industry Market Share: 2008 Hardlines Retail Revenues (\$ in billions)



Source: J.P. Morgan estimates; APPMA; AAIA Factbook; CEA; HFN; HIRI; TWICE; U.S. Census Bureau.

## What Business Are They In?

In our view, for most hardlines retailers, the answer to this question is a real estate location and supply-chain business. Indeed, Best Buy and Staples are considered the best in their respective industries, in large part due to their core skill sets in these areas. This is also why it is so tempting to invest in hardlines turnarounds. There is no “secret sauce” on the merchandising side due to the lack of product exclusivity. In the turnaround, you mimic the operating strategy of the superior competitor as best you can (while making strategic improvements) to drive the margin structure higher. Think of the planned turnarounds at Circuit City, Office Depot, and Linens ‘n Things. While results at these specific retailers have been extremely poor, this occurred during a cyclical/secular downturn. Second and third tier players have all the attractiveness of a receding pond during trough periods (hence you generally buy them during cyclical upswings).

Best Buy overtook Circuit City in the 1990s by executing a dominant real estate strategy against Circuit, which located in less-trafficked areas. Best Buy then reinvested its sales productivity into great merchandising systems and supply chain improvement.

## A Very Tough Business

However, consumer electronics is a more difficult business, in our view, which explains the market share concentration discussed above. We always say that if we were going to choose to open a retail store, electronics would be very low on our wish list (and this is in spite of our love of the products). We think the following factors make it such a challenging sector:

**Dependence on Innovation.** One might say that next year's sales are most dependent on the relative strength of new products being adopted. One needs innovation to maintain the strength of the product cycle. As indicated above, Wal-Mart is most threatening when the cycle is slowing and products go mass/get commoditized.

**Big-Ticket and Highly Discretionary Nature.** The products themselves tend to be big-ticket and are highly discretionary purchases. This makes the business susceptible to the mood of consumers.

**Increasingly Seasonality.** The disintermediation of CDs and DVDs is increasing the seasonality of the business, as these were the closest things to "consumables" that drove regular traffic that the retailers had.

**Lack of Product Exclusivity/Pricing Behavior.** The lack of vertical integration, the high cost of production, and "big boxing" of America all contribute to the lack of product exclusivity. These factors have also led to aggressive promotional postures by retailers/manufacturers, which in turn have trained the consumer to shop mainly based on price. The focus on services in the specialty channel is designed to add value, mitigate this behavior, and capture gross margin.

*We like to sum it up by saying that electronics has all the challenges of being an apparel retailer, but is bigger-ticket and lacks the gross margin benefit of offering its own brand merchandise.*

## Significant Correlations

In order to better understand the growth prospects and gauge our outlook for electronics retail stocks, we explored the relationships among a number of macro and sector-specific variables. We calculated a series of correlations that consider the growth rates of sales, comparable sales, stores, and EPS, in addition to valuation multiples, against both systematic and company-specific factors. From the macro side, we examined GDP growth, industrial production, real disposable income, spot oil prices, consumer confidence and nonfarm payroll growth.

The exhibit below presents year-over-year correlations between Best Buy's, Circuit City's, and RadioShack's financial metrics and macro factors. *Circuit is included for posterity's sake.*

Exhibit 13. Best Buy, Circuit City, and RadioShack Correlations Matrix

	GDP	Industrial Production	Real Disposable Income	Store Growth	Spot Oil Prices	Consumer Confidence	Nonfarm Payroll
<b>BBY</b>							
Sales	23%	17%	31%	51%	(14%)	5%	32%
Comps	71%	63%	59%	(31%)	(15%)	50%	53%
EPS	5%	1%	8%	(34%)	(6%)	4%	8%
<b>CC</b>							
Sales	53%	44%	35%	21%	(18%)	43%	38%
Comps	43%	30%	22%	(0%)	(15%)	42%	24%
EPS	NM	NM	NM	73%	NM	NM	NM
<b>RSH</b>							
Sales	9%	(5%)	(33%)	NM	66%	(4%)	1%
Comps	57%	50%	30%	NM	32%	16%	46%
EPS	14%	20%	27%	NM	(13%)	21%	15%

Note, CC results are through fiscal 2Q09.

Source: DLX Haver Systems; Fact Set; Company reports; J.P. Morgan estimates.

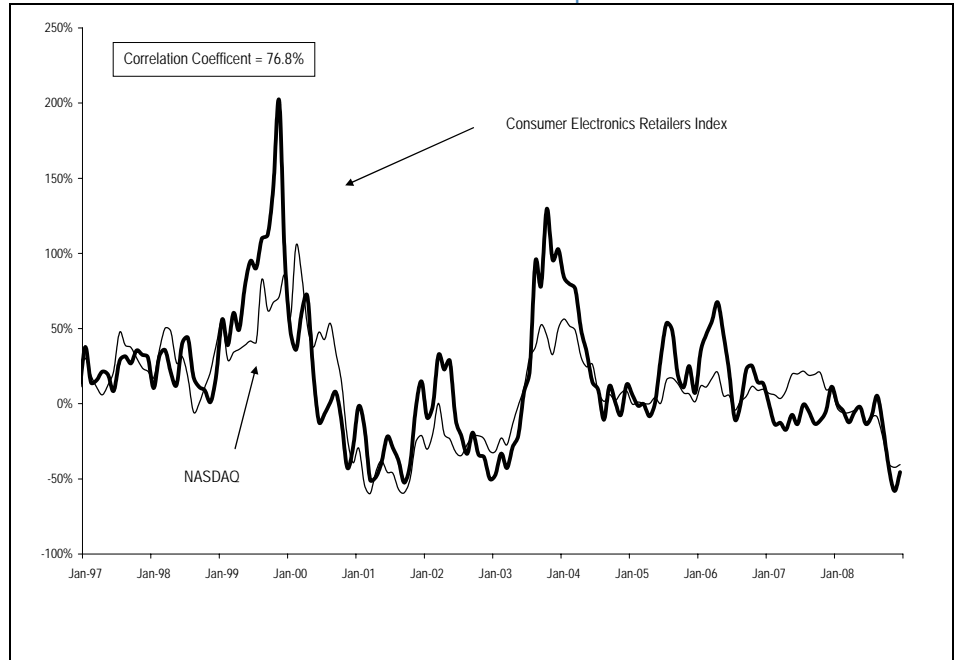
We found that GDP, industrial production, and real disposable income growth had the most significant relationships to same-store sales growth for all three retailers, in addition to consumer confidence and nonfarm payroll expansion (underscoring the discretionary nature of the products). For example, gross domestic product appears to be a reliable indicator of the consumer electronics industry. In order of strength, Best Buy (71%) is the most correlated, followed by RadioShack (57%) and Circuit City (43%). One key factor that can either boost or mitigate these correlations, in our opinion, is the strength or weakness in the consumer electronics product cycle.

As a note, we view the positive relationship between RadioShack's sales growth and spot oil prices as spurious.

## Stock Performance Correlations

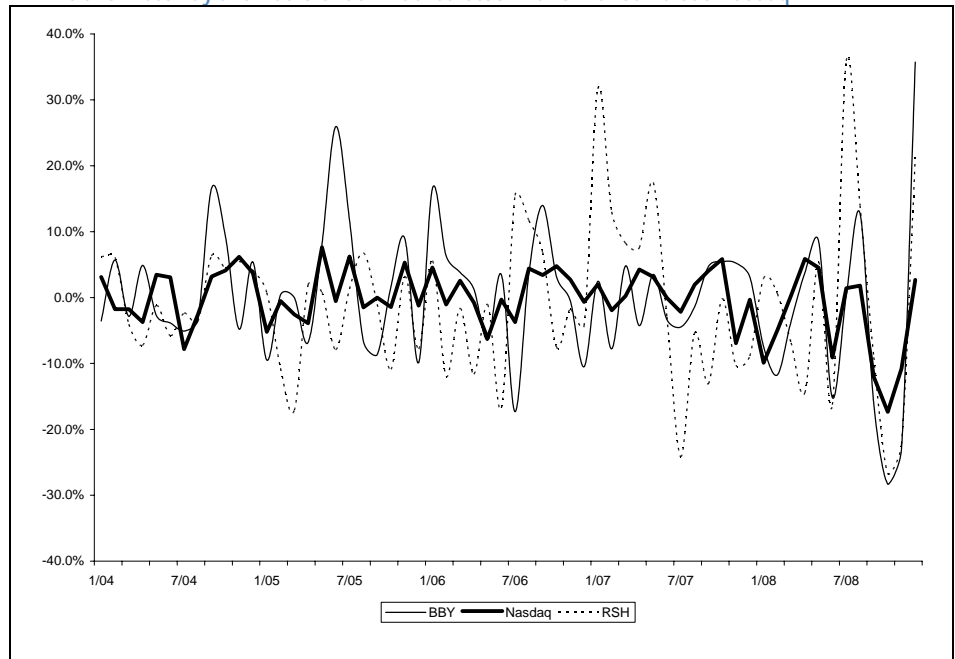
As illustrated in the exhibit below, the Nasdaq appears to be an indicator of consumer electronics index performance (perhaps coincident, but not a leading indicator).

Exhibit 14. CE Index Price Performance Versus the Nasdaq



Source: DLX Haver Systems; Fact Set; Company reports; J.P. Morgan estimates.

Exhibit 15. Best Buy and Radio Shack Indexed Stock Performance Versus Nasdaq



Source: DLX Haver Systems; Fact Set; Company reports; J.P. Morgan estimates.

## From New Product Cycle to Replacement Cycle

As we have emphasized, the product cycle is critical to results at the electronics retailers. Over the past few years, we have had a supercycle, with multiple products experiencing widespread adoption, including digital cameras, MP3 players, digital TVs (DTV), notebooks, and gaming platforms. Cell phones and GPS devices have also been strong. The weaker side of the mix has been CDs, DVDs, and home audio. Appliances, which have been weak over the past three years, were very strong during the housing boom.

Taken together, this drove a supercycle from the top-line perspective, with average ticket being the main catalyst for same-store sales. Traffic has faced a constant headwind from the deterioration in the high-frequency-purchase CD and DVD category and the maturation of non-traditional retail outlets (e.g., internet, discounters, etc).

Below, we examine the top line outlook for many of these categories, including the potential impact to sales, traffic, and margins. The exhibits that follow present factory sales dollars and growth by category for key aspects of the digital assortment.

Exhibit 16. U.S. Factory Sales by Category (\$ in millions)

	2004	2005	2006	2007	2008P	2009E
TVs and Displays	16,783	19,022	24,726	25,326	26,886	25,811
Video	4,658	4,206	4,747	4,911	6,630	6,895
Audio	3,390	2,862	2,763	2,966	2,669	2,269
Home IT and Security	37,931	40,083	40,682	42,783	43,639	41,457
Communications	2,986	2,915	2,678	2,244	2,020	1,737
In-Vehicle Technologies	7,062	7,860	9,357	10,762	11,838	11,128
Digital Imaging	6,390	7,315	9,827	9,197	9,565	8,991
Portable Entertainment	2,281	5,003	6,722	7,349	7,129	6,772
Electronic Gaming	10,512	11,128	12,927	16,850	19,378	21,509
Portable Communication	12,060	15,053	18,377	21,616	23,345	22,762
Accessories/Blank Media	16,593	17,821	19,181	19,201	19,585	19,977
Total	120,646	133,268	151,987	163,205	172,683	169,307

Source: Consumer Electronics Association; IDC; TWICE; J.P. Morgan estimates.

We expect factory sales of consumer electronics to fall 2% in 2009 (see Exhibit 17). Embedded in this is the high- to lower-ticket trade off — mixing away from TVs and notebooks to other product categories.

Exhibit 17. U.S. Factory Sales Growth by Category

	2004	2005	2006	2007	2008P	2009E
TVs and Displays	16%	13%	30%	2%	6%	(4%)
Video	(14%)	(10%)	13%	3%	35%	4%
Audio	13%	(16%)	(3%)	7%	(10%)	(15%)
Home IT and Security	18%	6%	1%	5%	2%	(5%)
Communications	NA	(2%)	(8%)	(16%)	(10%)	(14%)
In-Vehicle Technologies	11%	11%	19%	15%	10%	(6%)
Digital Imaging	8%	14%	34%	(6%)	4%	(6%)
Portable Entertainment	28%	119%	34%	9%	(3%)	(5%)
Electronic Gaming	3%	6%	16%	30%	15%	11%
Portable Communication	NA	25%	22%	18%	8%	(3%)
Accessories/Blank Media	NA	7%	8%	0%	2%	2%
Total	12%	10%	14%	7%	6%	(2%)
BBY Domestic Comps	4%	5%	4%	2%	(1%)	(2%)
CC Comps	1%	8%	6%	(8%)	-	-

Source: Consumer Electronics Association; CEA; TWICE; J.P. Morgan estimates.

## Entering a Replacement Cycle

CE retailers often speak of the adoption rate of a new product “hitting the sweet spot.” Theoretically, this is when adoption accelerates, leading to strong topline dollar growth, while higher unit sales offset price deflation driving accelerating gross margin dollar increases. Once a product passes the sweet spot, the rate of price compression begins to pressure profitability of the incremental sales. From a household penetration perspective, critical mass doesn’t occur until technologies become more widely understood and price points decline to more accessible levels. Hence, we believe the sweet spot occurs during the early majority stage of adoption under the standard S Adoption curve (i.e., during the time when penetration rises from 16% to the low 40% of households). After this point, commoditization sets in and “higher end” price points become sensible for sales in the mass channel.

Looking at the household penetration of the major product categories (see exhibit 18 below); we can see that we are well into the commoditization phase for many of the largest categories.

- DTVs had a 62% household penetration in January 2009, according to the CEA, which is significant, given the category represents approximately 15% of the market.
- Notebooks, which have been a big driver of growth had a penetration of 53%. Moreover, the adoption of netbooks is placing significant pressure on ASPs. Retailers had hoped that this was a “second laptop” for consumers. It looks to be turning out to be a replacement product.
- MP3 players and gaming consoles are both at 46% penetration, while digital cameras and wireless phones are at 77% and 90%, respectively.
- The most appealing growth opportunities are smartphones and navigation devices (both below 25% penetration).

The point is that the 2000s have witnessed a *breathtaking pace of innovation and adoption*. However, this doesn't measure up to what was experienced in the earlier part of the decade. Hence, we need to look at the category with a different lens: the new product cycle is now a replacement cycle. For the retailers, it is a question of share and how frequently the consumer upgrades their existing stable of consumer electronics products.

Exhibit 18. U.S. Household Penetration by Category

	01/2005	01/2006	01/2007	01/2008	06/2008	01/2009
Digital TV Sets and Displays						
DTV	12%	20%	33%	50%	56%	62%
HDTV	10%	16%	26%	41%	47%	53%
LCD TV	10%	12%	17%	26%	35%	41%
Plasma	1%	2%	5%	8%	10%	10%
Home Information Technology/Security						
All Home PCs	70%	74%	76%	82%	82%	83%
Desktop	70%	72%	68%	72%	72%	71%
Laptop	28%	32%	35%	47%	49%	53%
Imaging						
Digital Camera	42%	55%	59%	73%	74%	77%
Camcorder	45%	46%	48%	48%	49%	51%
Portable Media						
MP3 Players	14%	20%	33%	43%	44%	46%
Speaker Docks	4%	7%	12%	23%	28%	30%
Portable Communication						
Wireless Telephones	69%	73%	76%	87%	90%	90%
Smartphones	1%	4%	7%	18%	22%	23%
Video Gaming						
Portable	29%	30%	30%	30%	32%	33%
Console	37%	38%	39%	42%	44%	46%
Information/Security						
Electronic Car Alarm	40%	39%	39%	43%	45%	46%
Portable Navigation	3%	6%	8%	12%	13%	20%
In-Dish Navigation	2%	3%	4%	9%	12%	13%

Source: Consumer Electronics Association.

## The Appliance Case Study on Pulling Demand Forward

We believe it is noteworthy to reflect on the appliance category as a gauge on what the future may hold for different categories. During the peak of the housing boom, we believe that the major appliance replacement cycle (i.e., the period between new purchases) fell to ~7 years from a historical average of 12-14 years. Innovation (e.g., stainless steel, colors, front load, high efficiency) combined with the credit-fueled housing boom pulled forward 5-7 years of demand. This suggests that appliances should see below-trend sales growth to as late as 2012. While one could argue that innovation in this category remains solid, the pace of change and lack of easy credit are significant.

Electronics experienced a similar acceleration in innovation and easy money environment (and can be similarly big ticket and credit dependent). Below we summarize our view of the peak in product churn and direction of the replacement period for major CE categories.

Exhibit 19. Replacement Cycle Outlook (years, except as noted)

Category	Historic Average	Peak	Current	Direction
Major Appliances	12-14	7	10-12	Lengthening
Televisions	7	4	4	Lengthening
Computers	4	3	3-3.5	Slightly Lengthening
Wireless Phones	14-18 Months	14	14-15	Accelerating
MP3 Players	3	3	3	Constant

Source: J.P. Morgan estimates.

- For televisions, the mass adoption of flat-panel models has driven peak replacement periods over the past few years as the innovation curve was steep. However, given a 62% household penetration of digital TVs, the looming June digital transition deadline, and flattening of the innovation curve, we expect the replacement period to lengthen. While not reaching its historic average of seven years, we are nonetheless heading in the other direction.
- For computers, the largest consumer electronics category, replacement rates have been consistently between 3 to 4 years. Over the last few years, replacement periods fell to the low 3s as affordability, mobility, and new operating systems drove interest in the category. Microsoft's new operating system will probably drive sales when it is released (likely in early 2010), but we expect laptop sales to slow from its recent breathtaking pace and don't view netbooks as transformational.
- For wireless phones, replacement rates are generally inline with average contract life. However, the casual consumer adoption of new smartphones and the iPhone has led to acceleration in replacement rates. This category is one of the best positioned as this trend should continue (although stopped out by the minimum one year post-paid contract term).
- For MP3 players, replacement periods have fallen as penetration reached into the 40% of household range. As such, we believe that the current three year cycle should remain relatively constant. Innovation from Apple could significantly change this outlook, however.

### Conclusion: Less Juice Coming Out of the Bottom

Thus, in our view, the real at risk categories from a demand pull forward perspective are TVs and PCs/notebooks (these represent an estimates 40% or more of sales at Best Buy), in addition to appliances (6% of revenues). This suggests that the recovery in this category may be less pronounced than other areas that witnessed a cyclical trough (e.g., home improvement, office, and apparel; see Exhibit 4). This should generally be translated into both a less steep upward earnings revision cycle and lower multiple (vs. Home Depot, Lowe's, etc.).

## Gross Margin Headwinds Slow in 2009

Turning our attention from sales to gross margin dollars, it is critical to understand how this mix shift affects profitability. In the exhibit below, we highlight our

expected gross margin rate by category. Note that in the “Deep Dive into Digital TVs” section, we also analyze margins specifics to this category.

Exhibit 20. Estimated Gross Margins by Category Matrix

	2007E	2008E	2009E	Product Examples
TVs and Displays	27%	24%	22%	Televisions
Video	25%	22%	23%	Receivers, recorders, players
Audio	50%	50%	50%	Audio systems
Home IT and Security	13%	12%	13%	Computers, printers, peripherals
Communications	20%	20%	20%	Telephones, fax machines
In-Vehicle Technologies	49%	46%	45%	Sound equipment, security, GPS
Digital Imaging	23%	25%	23%	Digital cameras and camcorders
Portable Entertainment	12%	13%	15%	MP3 players, speaker docks
Electronic Gaming	20%	19%	18%	Gaming hardware and software
Portable Communication	29%	29%	29%	Wireless telephones, smartphones
Accessories/Blank Media	50%	50%	50%	All accessories

Source: Consumer Electronics Association; IDC; TWICE; J.P. Morgan estimates.

Looking at the exhibits above, as well as the one below, we believe a negative mix shift in margins is occurring, with relatively higher sales of lower-margin products (e.g., electronic gaming) and product margin contraction. Additionally, we project TVs and computers have the highest rate of high-margin warranty and services attachments, which are expected to see the largest declines and should weigh on the overall margin structure of specialty retailers.

Exhibit 21. Industry Sales Mix by Category

	2004	2005	2006	2007	2008P	2009E
TVs and Displays	13.9%	14.3%	16.3%	15.5%	15.6%	15.2%
Video	3.9%	3.2%	3.1%	3.0%	3.8%	4.1%
Audio	2.8%	2.1%	1.8%	1.8%	1.5%	1.3%
Home IT and Security	31.4%	30.1%	26.8%	26.2%	25.3%	24.5%
Communications	2.5%	2.2%	1.8%	1.4%	1.2%	1.0%
In-Vehicle Technologies	5.9%	5.9%	6.2%	6.6%	6.9%	6.6%
Digital Imaging	5.3%	5.5%	6.5%	5.6%	5.5%	5.3%
Portable Entertainment	1.9%	3.8%	4.4%	4.5%	4.1%	4.0%
Electronic Gaming	8.7%	8.4%	8.5%	10.3%	11.2%	12.7%
Portable Communication	10.0%	11.3%	12.1%	13.2%	13.5%	13.4%
Accessories/Blank Media	13.8%	13.4%	12.6%	11.8%	11.3%	11.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Consumer Electronics Association; IDC; TWICE; J.P. Morgan estimates.

Using our estimates of gross margin, our analysis suggests that the gross margin rate provided by the above technologies would create an additional 36 bps of gross margin pressure in 2009, following ~80 bps of projected headwinds in 2008 largely due to mix.

Exhibit 22. Estimated Industry Gross Margins

	Revenue			Gross Profit Dollars		
	2007	2008P	2009E	2007	2008P	2009E
TVs and Displays	25,326	26,886	25,811	6,838	6,453	5,678
Video	4,911	6,630	6,895	1,228	1,459	1,586
Audio	2,966	2,669	2,269	1,483	1,335	1,134
Home IT and Security	42,783	43,639	41,457	5,556	5,444	5,395
Communications	2,244	2,020	1,737	449	404	347
In-Vehicle Technologies	10,762	11,838	11,128	5,243	5,502	5,048
Digital Imaging	9,197	9,565	8,991	2,115	2,391	2,068
Portable Entertainment	7,349	7,129	6,772	882	927	1,016
Electronic Gaming	16,850	19,378	21,509	3,337	3,687	3,815
Portable Communication	21,616	23,345	22,762	6,204	6,658	6,507
Accessories/Blank Media	19,201	19,585	19,977	9,601	9,793	9,988
	163,205	172,683	169,307	42,935	44,051	42,583
<b>Total Gross Margin Rate</b>				<b>26.3%</b>	<b>25.5%</b>	<b>25.2%</b>
<i>Bp change</i>					<i>(80)</i>	<i>(36)</i>

Source: Consumer Electronics Association; IDC; TWICE; J.P. Morgan estimates.

## Vendors Offer Their Support

Vendor support has offered a margin cushion for a plethora of big box retailers in our coverage universe. Beginning in the third quarter and accelerating through the fourth quarter of 2008, retailers have explicitly highlighted vendor support for the reason behind substantial margin improvement. As a reference, vendors can support retailers through better merchandise allocations, superior terms, and/or improved prices. In our opinion, the highest quality and largest retailers now have the buying clout and distribution capability to lean on their vendors for more and more support.

Accordingly, we believe enhanced vendor support should benefit retailers through, at least, the third quarter of 2009. However, beginning in 3Q, we expect retailers to anniversary heightened support from their respective vendors. As such, margin recovery in the back half of 2009 should be more muted compared to the acute improvement in the first half of 2009.

A big driver of this phenomena was that the excess TV supply entering the holidays led to vendors providing significant back-end support to retailers to clear product. We believe that retailers “kept a little something for themselves” in 4Q. Indeed, witness the substantial expansion to gross margin for Best Buy (domestic up 30 bps).

## Deep Dive into Digital TVs

One of the largest and always topical categories in consumer electronics remains digital televisions. DTV wholesale revenue grew by 8% in 2007, to \$25.2 billion, and a projected 7% in 2008. However, in 2009, we anticipate a 4% decline to \$25.8 billion. We believe DTV unit growth peaked in 2006 when it grew ~107%, to 23.5 million units, falling to 24% growth in 2008. Going forward, we expect unit demand to slowdown to approximately 5% in 2009. Additionally, we expect average factory prices to fall over ~9% in 2009. As a reminder, we've historically seen commoditization once adoption rates hit the mid-40% range, which happened in mid-2007.

Exhibit 23. DTV Total Displays

Year	Units (000)	Wholesale Dollars		% Growth	Average Factory	% of Households	% of Households
		(\$MM)			Price	w/DTV	w/HDTV
1998	14	\$43		NA	\$3,147	0%	0%
1999	121	\$295		586%	\$2,433	0%	0%
2000	625	\$1,422		382%	\$2,275	0%	0%
2001	1,460	\$2,648		86%	\$1,812	1%	0%
2002	2,535	\$4,280		62%	\$1,688	4%	2%
2003	5,532	\$8,692		103%	\$1,590	8%	6%
2004	8,002	\$12,300		42%	\$1,537	12%	10%
2005	11,369	\$15,563		27%	\$1,369	20%	16%
2006	23,504	\$23,380		50%	\$995	33%	26%
2007	26,409	\$25,184		8%	\$954	50%	41%
2008P	32,743	\$26,886		7%	\$821	62%	53%
2009E	34,445	\$25,811		(4%)	\$749	74%	63%

Source: Consumer Electronics Association; IDC; TWICE; J.P. Morgan estimates.

As indicated in the exhibit that follows, the majority of growth in 2007 came from the LCD category, which according to the CEA, saw a wholesale revenue increase of ~72% during 2007. In 2008, we project that LCD revenue grew 25% vs. a 17% decline for plasma TVs. For 2009, we anticipate further deterioration in the LCD category with revenues up only 2%. Finally, we project plasma revenues to decline another 15%.

Exhibit 24. DTV Total Displays – Units, Dollars, ASPs (units in 000, \$ in MM, except ASP data)

DTV Total Sets and Displays				Total Flat Panel LCD			Total Plasma			Total Rear Projection			Total Direct View			Front Projection			Combinations / OLED		
Year	Units	Dollars	ASP	Units	Dollars	ASP	Units	Dollars	ASP	Units	Dollars	ASP	Units	Dollars	ASP	Units	Dollars	ASP	Units	Dollars	ASP
2003	5,532	\$8,692	\$1,571	1253	\$664	\$530	342	\$1,590	\$4,649	2,444	\$3,678	\$1,505	703	\$673	\$957	\$790	\$2,087	\$2,642	-	-	-
2004	8,002	\$12,300	\$1,537	1,842	\$1,579	\$857	870	\$2,347	\$2,698	3,510	\$5,543	\$1,579	974	\$728	\$747	\$806	\$2,103	\$2,609	-	-	-
2005	11,369	\$15,563	\$1,369	4,013	\$3,258	\$812	1,639	\$3,609	\$2,202	2,965	\$4,441	\$1,498	1,236	\$821	\$664	\$802	\$2,914	\$3,633	650	\$520	\$800
2006	23,504	\$23,380	\$995	10,325	\$8,430	\$816	3,028	\$5,302	\$1,751	3,064	\$4,427	\$1,445	4,946	\$1,594	\$322	\$1,003	\$2,943	\$2,934	1,138	\$684	\$601
2007	26,409	\$25,184	\$954	16,843	\$14,520	\$862	3,166	\$4,488	\$1,418	1,671	\$2,038	\$1,220	2,164	\$413	\$191	\$1,122	\$2,996	\$2,670	1,443	\$665	\$461
2008P	32,743	\$26,886	\$821	23,764	\$18,108	\$762	3,548	\$3,715	\$1,047	1,070	\$1,177	\$1,100	1,324	\$270	\$204	\$1,240	\$2,841	\$2,291	1,797	\$775	\$431
2009E	34,445	\$25,811	\$749	26,735	\$18,538	\$693	3,350	\$3,157	\$942	597	\$521	\$874	452	\$75	\$166	\$1,312	\$2,635	\$2,008	2,000	\$885	\$442

DTV Total Displays				Total LCD			Total Plasma			Total Projection			Total Direct View			Front Projection			Combinations / OLED		
Year	Units	Dollars	ASP	Units	Dollars	ASP	Units	Dollars	ASP	Units	Dollars	ASP	Units	Dollars	ASP	Units	Dollars	ASP	Units	Dollars	ASP
2005	42%	27%	(11%)	118%	106%	(5%)	88%	54%	(18%)	(16%)	(20%)	(5%)	27%	13%	(11%)	(0%)	39%	39%	NM	NM	NM
2006	107%	50%	(27%)	157%	159%	1%	85%	47%	(20%)	3%	(0%)	(4%)	300%	94%	(51%)	25%	1%	(19%)	75%	32%	(25%)
2007	12%	8%	(4%)	63%	72%	6%	5%	(15%)	(19%)	(45%)	(54%)	(16%)	(56%)	(74%)	(41%)	12%	2%	(9%)	27%	(3%)	(23%)
2008P	24%	7%	(14%)	41%	25%	(12%)	12%	(17%)	(26%)	(36%)	(42%)	(10%)	(39%)	(35%)	7%	11%	(5%)	(14%)	25%	17%	(6%)
2009E	5%	(4%)	(9%)	13%	2%	(9%)	(6%)	(15%)	(10%)	(44%)	(56%)	(21%)	(66%)	(72%)	(19%)	6%	(7%)	(12%)	11%	14%	3%

Source: Consumer Electronics Association; IDC; TWICE; J.P. Morgan estimates.

## TV Pricing Outlook

As indicated in the previous exhibit, the average selling price (ASP) of digital TVs declined approximately 27% in 2006 and 4% in 2007, followed by our projection of 14% in 2008. However, in 2008, this number masks the weakness in actual prices, since like-for-like plasma prices fell more than 50% and LCDs were down 30% or more. The difference lies in the value of consumers' trade-up to large screen sizes and better technologies. Focusing on LCD and plasma, we expect ASPs to have declined 12% and 26%, respectively, in 2008, and to decline another 15% and 25%, respectively, in 2009.

**Consumers Balking at Price Increases.** Recent checks indicate that consumers are balking at 2009 new model pricing, which is up \$200-\$400 vs. comparable 2008 versions. We believe that this is symptomatic of both consumer malaise as well as the "worth" of incremental functionality. As discussed in our 2009 CES highlights note, we believe that functional improvements like 240 MHZ, increased HDMI inputs, and Net-ready access are beyond the average consumer's interest at this point.

**Smaller Screen Sizes Seeing Fastest Growth – Bad for ASP's and Attachments.** In addition, so far in 2009, we believe that the best growth is seen in the 24" to 35" screen sizes. This is symptomatic of the incremental adopter (often lower relative income) and the purchasing of secondary sets (e.g., for the bedroom). *This places more channel shift pressure to non-specialty players.*

**2006-2007 In Review.** One of the ever-present concerns in electronics is TV pricing. In late 2006, a succession of events caused the dramatic declines noted above and investors were worried that this would recur in 2007. It did not, however, since the root cause of the declines, a supply/demand imbalance, was addressed. Also, retailers and manufacturers circled the wagons and addressed some of the damaging behavior in different places in the value chain, which resulted in rational pricing in 2007. Finally, the shift to 1080p combined with increased velocity of new SKU introductions (i.e., more frequent SKU upgrades) aided pricing in 2007.

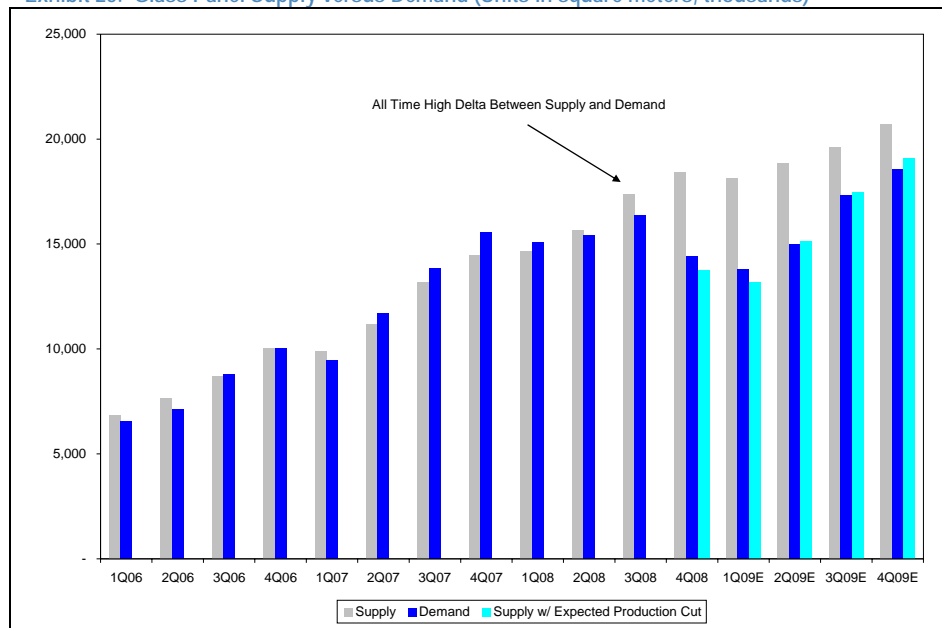
**2008: Pricing Took a Big Hit, But Vendors Supported the Retailers.** We believe pricing environment was more fragile in 2008 due to: 1) the cornering of plasma by LCD; 2) an overall dissipation of the factors that stabilized pricing in 2007; 3) the adoption curve favoring discounters; and 4) a supply-demand imbalance.

As macro pressures weighed on consumer spending and confidence throughout 2008, supply began to outpace demand and the factors mentioned above were not helpful to year-over-year pricing trends. Thus, the gap between supply and demand reached an all time high during the third quarter of 2008, which had negative implications for pricing toward the all important fourth quarter selling season. However, vendors stepped up promotional support, essentially protecting (and boosting) retailer margins.

## Glass Panel Capacity Analysis

See below for a historical and prospective look at manufacturing supply versus demand for LCD glass panels. Estimates are provided by our Asia-based research analysts.

Exhibit 25. Glass Panel Supply versus Demand (Units in square meters, thousands)



Source: J.P. Morgan estimates.

### Manufacturers' Balancing Act

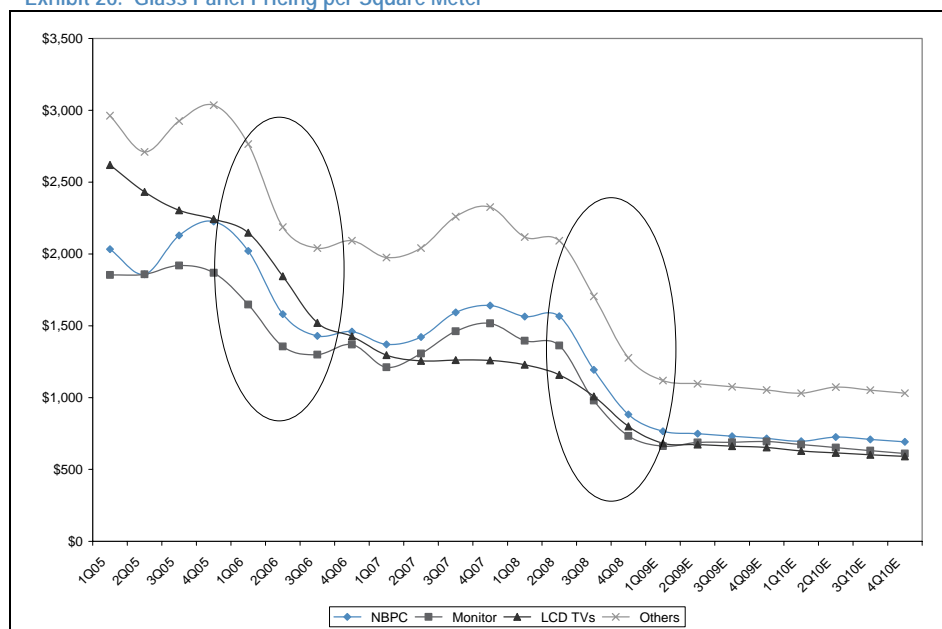
We expect the demand environment to remain extremely volatile in 2009 and supply needs to be managed carefully to minimize the potential for large supply-demand imbalances. According to J.P. Morgan Technology Analyst JJ Park (our J.P. Morgan counterpart in the Asia Pacific region), with production cuts (highlighted in the chart above) the supply of panels can be managed through lower plant utilization rates. However, scheduled new capacity increases and market share strategies could upset the balance. In other words, at current levels, there is more risk to the downside from an oversupply perspective (as we chased demand lower). Finally, we note that the recent ramping of production is in response to a severe under-supply combined with the ramp for new 2009 model introductions.

### Panel ASPs – Still Going Lower, But at a Slower Rate

Panel ASPs (on the manufacturing side) saw substantial declines during the end of 2008 and beginning of 2009, rivaling declines seen during the disastrous 2006 timeframe. In 3Q08, 4Q08 and 1Q09, the blended ASP decreased 20%, 24% and 14% year-over-year, respectively. As a reminder, the previous largest ASP decline was ~16% in the second quarter of 2006.

As indicated in the exhibit below, panel prices per square meter started to nosedive after the second quarter of 2008 to under the \$1,000 price point. Prices are not expected to stabilize until they reach the \$500 per square meter price range.

Exhibit 26. Glass Panel Pricing per Square Meter



Source: J.P. Morgan estimates.

### Looking at the TV Transaction at Retail

In the exhibit below, we present the estimated gross margin dollar impact for TV transactions at Best Buy. Note that we include our forecasts for warranty and accessory attachments, but do not include services.

Exhibit 27. BBY Estimated Total TV Transaction (ex services) (\$ in millions)

	DTV Sales			Attachment Sales		Warranty Sales		Total Transaction		
	% DTV			Sales	GM \$	Sales	GM \$	Total TV Related		
	Sales	Mkt	GM \$					Sales	GM \$	% Change
2005	\$4,010	17%	\$1,363	\$401	\$201	\$771	\$540	\$5,182	\$2,104	NA
2006	\$5,213	16%	\$1,564	\$417	\$209	\$791	\$514	\$6,421	\$2,286	8.7%
2007	\$6,256	18%	\$1,689	\$626	\$313	\$836	\$502	\$7,718	\$2,504	9.5%
2008P	\$6,944	20%	\$1,667	\$625	\$312	\$945	\$520	\$8,514	\$2,499	(0.2%)
2009E	\$7,291	22%	\$1,604	\$583	\$292	\$891	\$445	\$8,766	\$2,341	(6.3%)

Source: J.P. Morgan estimates.

One of the challenges is that we believe that as TV prices compress, warranty attachments decline. While 2006 and 2007 were years in which we believe TV-driven gross margin dollars grew, 2008 is projected to have been approximately flat. For 2009, we anticipate a mid-single digit decline in TV-driven gross profit dollars. The key will be to drive services attachments, while optimizing the labor model, as an efficient home theater install business can offer gross margin rates 50% and higher.

## A Look at Appliances

According to Twice Magazine, the top 10 appliance retailers represent over 80% of the entire domestic marketplace. Furthermore, approximately 74% of the market in 2007 was comprised of the top four retailers, which includes Sears, Lowe's Home Depot and Best Buy.

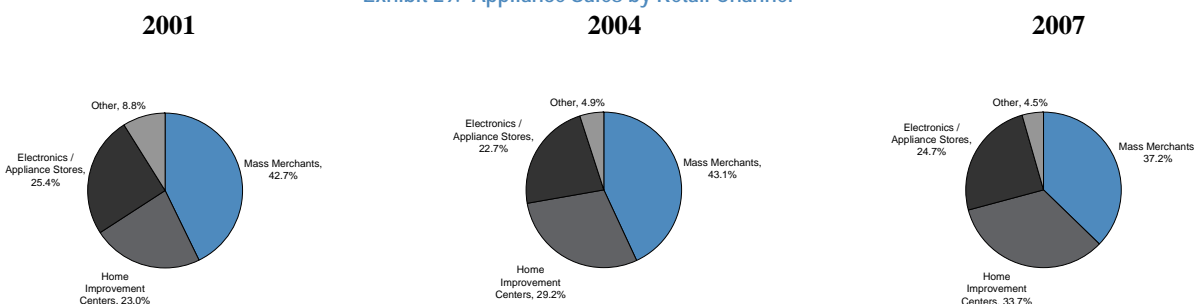
Exhibit 28. Top 10 Appliance Retailers

Store Name	2001		2004		2007
Sears	42.1%	Sears	39.5%	Sears	33.2%
Lowe's	19.2%	Lowe's	17.3%	Lowe's	17.3%
Best Buy	7.8%	Home Depot	11.1%	Home Depot	15.5%
Home Depot	4.9%	Best Buy	7.1%	Best Buy	7.7%
P.C. Richard & Son	2.9%	Wal-Mart	2.9%	Wal-Mart	2.8%
Wal-Mart	2.1%	P.C. Richard & Son	2.5%	P.C. Richard & Son	2.4%
H.H. Gregg	1.5%	H.H. Gregg	1.6%	H.H. Gregg	1.9%
Sam's Club	1.4%	Sam's Club	1.0%	BrandsMart U.S.A.	1.1%
Conn's	1.1%	BrandsMart U.S.A.	0.9%	Conn's	0.9%
BrandsMart U.S.A.	1.1%	Pacific Sales	0.9%	Costco Wholesale	0.8%
Total Share	84.0%	Total Share	84.7%	Total Share	83.8%

Source: Twice Magazine.

Below is a breakdown of appliance sales by distribution channel. From 2001 through 2007, the mass merchant channel remains the biggest distributor of major appliances; however, the segment has been consistently losing market share over the past few years. On the other hand, the home improvement centers, led by Lowe's and Home Depot, have been steadily increasing their market share at the expense of the mass channel.

Exhibit 29. Appliance Sales by Retail Channel



Source: TWICE; Consumer Electronics Association; J.P. Morgan estimates.

In the addendum below, we highlight the top 100 appliance retailers from 2007 by sales.

## Addendum

Store Name	2007 Sales	Market Share	2007 Sales	Market Share
1 Sears	\$8,320	34.5%	51 Karl's TV & Appliance	28 0.1%
2 Lowe's	4,325	17.9%	52 Navy Exchange	28 0.1%
3 Home Depot	3,891	16.1%	53 Atherton Appliance and Kitchen	26 0.1%
4 Best Buy	1,924	8.0%	54 Grand Appliance	25 0.1%
5 Wal-Mart	713	3.0%	55 ApSCO Appliance Centers	25 0.1%
6 P.C. Richard & Son	602	2.5%	56 Leiberts Royal Green Appliance Center	25 0.1%
7 H.H. Gregg	486	2.0%	57 La Curacao	25 0.1%
8 BrandsMart U.S.A.	269	1.1%	58 Olum's	24 0.1%
9 Conn's	224	0.9%	59 BJ's Wholesale Club	24 0.1%
10 Costco Wholesale	211	0.9%	60 DeSears Appliance	23 0.1%
11 Pacific Sales (Best Buy)	188	0.8%	61 Bill Smith Appliance & Electronics	23 0.1%
12 Target	182	0.8%	62 Albert Lee Appliance Co.	22 0.1%
13 ABC Warehouse	173	0.7%	63 Handy TV & Appliance	22 0.1%
14 Abt Electronics & Appliance	160	0.7%	64 Colder's	22 0.1%
15 Menards	160	0.7%	65 Filco Appliance	22 0.1%
16 Sam's Club (Wal-Mart)	137	0.6%	66 Rosa's Home Stores	22 0.1%
17 EXPO Design Center	136	0.6%	67 Yale Appliance & Lighting	21 0.1%
18 R.C. Willey Home Furnishings	133	0.6%	68 Charlotte Furniture and Appliance	20 0.1%
19 American TV & Appliance	117	0.5%	69 Baillio's Electronics & Appliance Connection	20 0.1%
20 Nebraska Furniture Mart	101	0.4%	70 Aitoro Appliance and Electronics	20 0.1%
21 The Great Indoors (Sears)	89	0.4%	71 Judd & Black Appliance	19 0.1%
22 Appliance Direct	86	0.4%	72 Walter's Home Appliance	19 0.1%
23 Kmart (Sears)	84	0.3%	73 Gerhard's	18 0.1%
24 Fry's Electronics	79	0.3%	74 Kennedy Hahn Appliance	18 0.1%
25 Grants Appliance	77	0.3%	75 Recker and Boerger	18 0.1%
26 Army-Air Force Exchange	73	0.3%	76 Lakeside Appliance	18 0.1%
27 Standards of Excellence North	73	0.3%	77 Big Sandy Superstores	17 0.1%
28 ApplianceSmart	70	0.3%	78 Mr. Jay Appliance & TV	17 0.1%
29 Karl's TV & Appliance	66	0.3%	79 Van Vreede's	17 0.1%
30 Spencer's TV & Appliances	65	0.3%	80 Lack's Stores	17 0.1%
31 Queen City Audio Video & Appliances	65	0.3%	81 Manny's TV & Appliances	16 0.1%
32 Howard's Appliance	64	0.3%	82 Christie's Appliance	15 0.1%
33 Famous Tate	63	0.3%	83 Art Handler Appliance Center	15 0.1%
34 Rex	62	0.3%	84 Alabama Power Appliance Center	14 0.1%
35 Orville's Home Appliances	61	0.3%	85 Airport Home Appliance	14 0.1%
36 Bernie's	60	0.2%	86 Plessers Appliance	13 0.1%
37 Bray & Scarff	60	0.2%	87 Urner's	13 0.1%
38 Western Appliance TV & Stereo	51	0.2%	88 Midway Appliance	13 0.1%
39 W. S. Badcock	48	0.2%	89 John D. Marcella Appliances	13 0.1%
40 Ferguson	47	0.2%	90 Appliance World	12 0.0%
41 Warners Stellan Appliance	47	0.2%	91 Jeff Lynch Appliance & TV Center	12 0.0%
42 Jetson TV & Appliance Centers	42	0.2%	92 B & B Appliance	12 0.0%
43 University Electric	36	0.1%	93 Agren Appliance	11 0.0%
44 Appliance Factory Outlet	35	0.1%	94 Oldfield's	11 0.0%
45 County TV & Appliance	35	0.1%	95 Bob Wallace Appliance	11 0.0%
46 AJ Madison	31	0.1%	96 Appliance Connection	11 0.0%
47 Vann's	30	0.1%	97 Appliance Center of Toledo	11 0.0%
48 Boscov's	30	0.1%	98 Spicher's Appliance & Electronics	11 0.0%
49 Plass Appliance	29	0.1%	99 Carmona's Appliances	10 0.0%
50 Cowboy Maloney's Electric City	28	0.1%	100 Dick Van Dyke Appliance World	9 0.0%

Source: Twice Magazine.

**Companies Recommended in This Report (all prices in this report as of market close on 07 May 2009)**

Best Buy (BBY/\$39.04/Neutral)

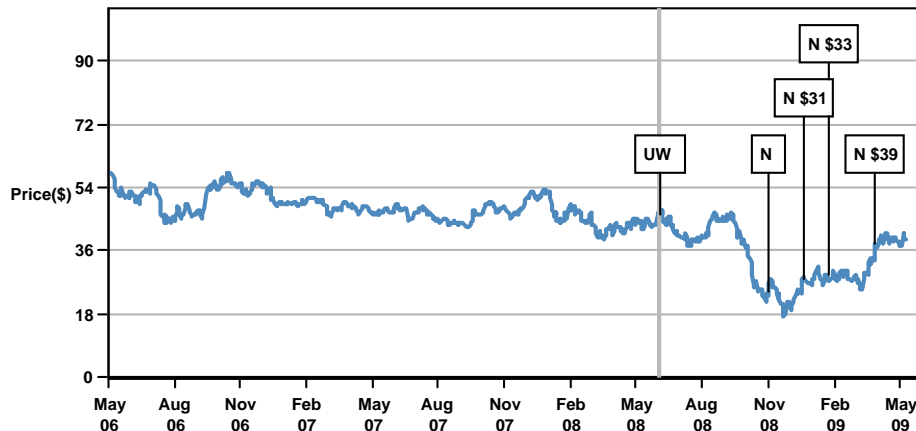
**Analyst Certification:**

The research analyst(s) denoted by an “AC” on the cover of this report certifies (or, where multiple research analysts are primarily responsible for this report, the research analyst denoted by an “AC” on the cover or within the document individually certifies, with respect to each security or issuer that the research analyst covers in this research) that: (1) all of the views expressed in this report accurately reflect his or her personal views about any and all of the subject securities or issuers; and (2) no part of any of the research analyst’s compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst(s) in this report.

**Important Disclosures**

- **Lead or Co-manager:** JPMSI or its affiliates acted as lead or co-manager in a public offering of equity and/or debt securities for Best Buy within the past 12 months.
- **Client of the Firm:** Best Buy is or was in the past 12 months a client of JPMSI; during the past 12 months, JPMSI provided to the company investment banking services, non-investment banking securities-related service and non-securities-related services.
- **Investment Banking (past 12 months):** JPMSI or its affiliates received in the past 12 months compensation for investment banking services from Best Buy.
- **Investment Banking (next 3 months):** JPMSI or its affiliates expect to receive, or intend to seek, compensation for investment banking services in the next three months from Best Buy.
- **Non-Investment Banking Compensation:** JPMSI has received compensation in the past 12 months for products or services other than investment banking from Best Buy. An affiliate of JPMSI has received compensation in the past 12 months for products or services other than investment banking from Best Buy.

Best Buy (BBY) Price Chart



Date	Rating	Share Price (\$)	Price Target (\$)
02-Jun-08	UW	46.07	--
31-Oct-08	N	24.61	--
17-Dec-08	N	27.68	31.00
20-Jan-09	N	29.34	33.00
27-Mar-09	N	37.67	39.00

Source: Reuters and J.P. Morgan; price data adjusted for stock splits and dividends.  
 Break in coverage Mar 16, 2004 - Nov 24, 2004, and May 31, 2008 - Jun 02, 2008. This chart shows J.P. Morgan's continuing coverage of this stock; the current analyst may or may not have covered it over the entire period.  
 J.P. Morgan ratings: OW = Overweight, N = Neutral, UW = Underweight.

**Explanation of Equity Research Ratings and Analyst(s) Coverage Universe:**

J.P. Morgan uses the following rating system: **Overweight** [Over the next six to twelve months, we expect this stock will outperform the average total return of the stocks in the analyst’s (or the analyst’s team’s) coverage universe.] **Neutral** [Over the next six to twelve months, we expect this stock will perform in line with the average total return of the stocks in the analyst’s (or the analyst’s team’s) coverage universe.] **Underweight** [Over the next six to twelve months, we expect this stock will underperform the average total return of the stocks in the analyst’s (or the analyst’s team’s) coverage universe.] The analyst or analyst’s team’s coverage universe is the sector and/or country shown on the cover of each publication. See below for the specific stocks in the certifying analyst(s) coverage universe.

Coverage Universe: **Christopher Horvers, CFA:** Advance Auto Parts, Inc. (AAP), AutoZone, Inc. (AZO), Bed Bath & Beyond (BBBY), Best Buy (BBY), Cabela’s Inc. (CAB), Dick’s Sporting Goods (DKS), Hibbett Sports, Inc. (HIBB),

Lowe's Companies, Inc. (LOW), O'Reilly Automotive (ORLY), Office Depot (ODP), OfficeMax Inc. (OMX), PetSmart, Inc. (PETM), RadioShack (RSH), Staples (SPLS), The Home Depot (HD), Williams-Sonoma, Inc. (WSM)

**J.P. Morgan Equity Research Ratings Distribution, as of March 31, 2009**

	<b>Overweight (buy)</b>	<b>Neutral (hold)</b>	<b>Underweight (sell)</b>
JPM Global Equity Research Coverage	35%	46%	19%
IB clients*	54%	54%	42%
JPMSI Equity Research Coverage	35%	51%	14%
IB clients*	75%	73%	57%

\*Percentage of investment banking clients in each rating category.

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