

RESEARCH REPORT



Bricks and Clicks: Rethinking Retail Real Estate in the E-commerce Era

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Abstract and Summary

Internet retailing has been growing steadily over the past decade but still accounts for a small share of overall retailing. However, e-commerce is now poised for explosive growth on the strength of rapidly evolving consumer shopping habits and game-changing retail technology. Impacts on the shopping center industry will be profound and far-reaching.

The retail sector is finally recovering from the recession's brutal downturn, though not uniformly. The chasm between the best- and worst-performing shopping centers continues to widen as a host of structural and cyclical forces buffet this ever-dynamic industry. Against this backdrop, retailers and landlords are facing a new set of challenges and opportunities as internet technology transforms both consumer behavior and retailing business models. Mobile commerce has arrived, with deep and pervasive impacts across the industry.

With the recession's financial strains still raw, consumers demand even more value, on top of the greater convenience they have come to expect. Retailers are rethinking the role of stores in their platform and leveraging technology to reach their customers faster, easier and cheaper. Chains are abandoning their old paradigm of "bigger and more" in favor of a leaner model of "smaller and fewer" stores as they push more sales online. Meanwhile, preferred store locations are moving closer to shoppers. These shifts carry significant implications for both shopping centers and warehousing.

The greatest disruption will occur in the big-box segment that itself upended industry practices over the past 50 years – driving down prices while providing consumers with easy access to an unprecedented variety of goods. But now their very value proposition is under assault. Big-box stores will not go away quietly or immediately, but their dominance will decline, replaced by online alternatives offering superior selection, lower prices, and even more convenience.

Though taking shape only now, these shifts and their downstream impacts will both accelerate and intensify in the next few years. We continue to see outstanding opportunities in the retail sector, but investors must be more selective in their asset selection, preferring well-located sites and unique shopping environments over commodity space in inferior locations. Investors should be especially cautious in pursuing value-add opportunities that aim to reposition struggling centers in anticipation of a general market recovery. The retail sector already suffers from a significant oversupply of commodity space, and emerging technologies will only augment this obsolescence.

Among our key findings and conclusions:

- Financial pressures and the e-commerce revolution are forcing retailers to emphasize sales productivity over total sales growth. Shrinking store counts and footprints are paramount. These forces favor central locations affording easy access for shoppers and quick delivery for retailers. With less inventory in stores, warehouses servicing retailers similarly will need to locate more centrally.
- The online share of retailing has been growing steadily in the last decade, but remains low, accounting for only about 5% of non-auto sales, though twice that in key segments amenable to online selling. However, e-commerce is on the verge of prodigious growth: Capital for new shopping applications ("apps") is flooding e-

commerce channels just as consumer adoption of mobile tools – smart phones and tablets – is soaring. The result will be significantly greater rates of at-home online shopping and in-store “showrooming.” Expect online sales to double their market share within five years.

- Though in the early stages of adoption, mobile shopping apps will continue to drive product and price transparency. Bricks-and-mortar chains are fighting back with a variety of strategies, morphing into multi-channel retailers enhancing the customer experience by leveraging internet (“e-commerce”) and mobile (“m-commerce”) technologies. Their twin goals: to differentiate themselves from more efficient and convenient “pure-play” (internet-only) retailers and reduce price-matching pressure.
- Retailers rising to meet online threats can be found across all market segments. But certain types of bricks-and-mortar retailers and shopping centers are best positioned to thrive in this new environment:
 - luxury retailers focused on service and unique product offerings;
 - discount and value retailers that can compete with online retailers on price and convenience;
 - grocery-anchored centers located convenient to shoppers with service and food tenants that are less vulnerable to online sales;
 - retailers, retail centers, and urban shopping districts that can offer consumers distinct, compelling experiences as alternatives to relatively sterile online shopping, particularly flagship locations that showcase brands.
- Institutional-quality retail property is generally healthier than is suggested by broad industry data, as “average” vacancy and rent figures are distorted by the extremely poor performance of a relatively few failing centers. Upwards of 10% of the retail stock is redundant, as evidenced by enduring vacancies of 40% or more at functionally obsolete centers. Excluding these centers lowers the measured vacancy rate for the nation’s shopping centers by almost three percentage points, while showing less volatility over the business cycle.
- We expect e-commerce to double the number of these obsolete centers within a decade as retailing increasingly migrates online, to the detriment of weak bricks-and-mortar concepts, poorly-located centers, and inferior retail centers generally.
- Landlords of the best retail space should benefit from this industry shake-out, gaining market share while shifting retailer preferences toward smaller stores will enhance their rent capacity. The smaller store sizes will also enable landlords to fit more retailers into the same amount of space, creating more exciting retail environments.

Introduction

The real estate sector is changing. Again. Positioned at the crossroads of demographics, fashion, commerce, and economics, retail has always been the most dynamic of the property sectors. But the current transformation has been particularly swift as technology has both enabled and encouraged new retailing business models at the same time that the recent financial crisis forced households to deleverage and rethink their shopping habits: Consumers are changing where, how, and even why they shop.

Consumers are changing where, how, and even why they shop.

Three years ago RREEF Real Estate explored the structural changes transforming the retail landscape, beyond just the cyclical trends that were then rocking the sector.¹ We considered changes in consumer spending patterns attributable to demographic shifts (age, ethnicity, income and wealth); changes in retailers' locational strategies (fewer stores) and space preferences (smaller prototypes); and the growing impact of internet retailing on traditional retail stores. Among the conclusions: slow, modest recovery for the sector overall with a growing divide between the industry's winners and losers, as the sector adjusts to legacy overcapacity in an era of more limited growth. We now revisit this topic with a spotlight on the technology.

RREEF Real Estate first explored the internet's impact on shopping centers more than a decade ago, reaching some of the same general conclusions presented here.² The difference today, though, concerns both scale and context: Online retailing now constitutes a much larger share of the retail sector, with little doubt that e-commerce is growing largely at the expense of traditional bricks-and-mortar retailers. And the move toward online transactions is accelerating just as the industry is still struggling to regain its footing after the painful recession.

To be sure, the retail sector is firmly on the mend: Aggregate sales are back to historic highs. Even better, many retailers are leasing again on the strength of restored balance sheets, renewed consumption, and extremely favorable lease terms. But there is considerable and growing variation underlying these averages, with some segments (better malls and high-street retail) and metros (generally coastal, gateway markets) in full recovery while others suffer lingering vacancy and declining rents. E-commerce is now magnifying these differentials, even as it has allowed retailers to expand sales at lower cost margins.

In this paper we focus on how e-commerce – and its subset, m-commerce – is reshaping the retail sector, with emphasis on implications for retail real estate. These changes are providing new opportunities for dynamic retailers and retail property owners alike, but also raise new challenges for tired concepts. Coming on the heels of a particularly deep recession focused on the consumer sector, the sorting between winners and losers will be especially sharp as innovative retailers capitalize on the changing landscape and thrive, while those unable to adapt quickly or extensively enough will be swamped.

In summary, the retail sector overall is healthier than many believe, but there is a growing gulf in performance among shopping centers. After documenting this differential, we explore the key technology issues transforming the retail sector. Among other findings, we believe that the relatively steady growth of online market share in the last decade is set for much faster growth due to recent and profound changes in rates of consumer adoption and enabling technology. We conclude with an assessment of likely impacts on different types of retail space, with implications for investors and owners of retail property.

Unmasking the Retail Property Market

The shopping center industry overall is healthier than is suggested by “average” vacancy and rent data from standard data sources, which mask the growing performance gap among the nation’s shopping centers. Excluding the worst-performing (and less representative) centers from the statistics reveals much more positive industry conditions.

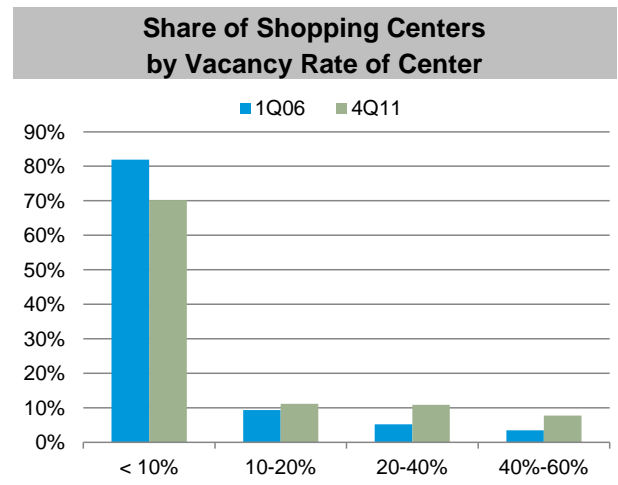
By any measure, the downturn experienced by the retail sector during the recent recession was the most wrenching in more than a half century. For a sector with a record of sustained growth, managing to grow through good years and bad, the shake-out felt particularly harsh. In fact, data compiled by REIS covering the nation's neighborhood and community centers – two thirds of all United States shopping center space – show not a single year of negative net absorption since REIS began tracking occupancy in 1980. And the unbroken streak of growth undoubtedly goes back much further than that, fueled by a powerful combination of population growth, post-war economic expansion, rising worker productivity, real income gains, and the availability of consumer credit. Rent declines over this period were almost as rare.

But this last recession was different, with an unprecedented three consecutive years of significant occupancy and rent losses. Vacancies in nation's shopping centers surged from 6.1% to 9.7%, a rise of 3.6 percentage points at their peak, before falling back 0.5 points in the early stages of recovery, with 9.2% of space currently vacant.³ However, these aggregated figures do not reflect the segmented fortunes of the nation's retail space, with widening spreads among the winners and losers and those in between. The average statistics also mask the full extent of improvement in the healthier parts of sector.

Industry rent and vacancy averages are distorted by a relatively few poor retail centers.

Unlike with other property types, the quality of retail assets depends less on physical attributes than on the strength of the tenant mix and site-specific features. With no clear-cut method of quantifying retail-center quality, industry data aggregates the best space together with the worst and everything in between, masking critical distinctions in the results achieved by individual assets and distorting "typical" performance in the market. Accordingly, "average" vacancy statistics provide a misleading perspective on industry conditions.

CoStar data shows that about 70% of shopping centers in the United States enjoyed vacancy rates under 10% as of year-end 2011. Meanwhile, 11% of centers had vacancies of between 20% and 40%, 4% had vacancies of 40% to 60%, and an unfortunate 3% suffered even higher vacancy rates. Alternately viewed, centers having at least 40% vacancy account for a third of all vacant space in the nation's shopping centers, despite having just 5% of GLA. Excluding these obsolete centers reduces the measured national vacancy rate by almost 300 basis points, to about 6.4%. This adjusted vacancy rate is more consistent with that achieved by top REITs and offers a more realistic account of performance for institutional-quality retail centers.



Sources: CoStar and RREEF Real Estate.
As of December 2011.

Moreover, the performance gap among centers has doubled since 2006. Significantly, this gap was rising even during the frothy years of the expansion (2006-08), suggesting secular forces unrelated to the recession have been separating the winners from the losers – the downturn only reinforced those forces. Meanwhile, the spread has held steady in the early

stages of the recovery, meaning the weaker centers are not regaining their lost market shares.

This trend can be seen in the change in the number of centers at various vacancy levels over the past five years. In this “trifurcated” market, the proportion of centers with occupancy over 90% (the “A” centers) fell from 81.9% to 70.2% between 2006 and 2011, while those under 80% (the “C” centers) increased from 8.7% to 18.7%; the middle ground (the “B” centers) saw much less change. Clearly, not all shopping centers shared equally when chains closed stores. Better retailers have been increasingly migrating to the superior centers and opening flagship stores while closing their underperforming stores at inferior centers.

Excluding “zombie centers” reduces the effective vacancy rate by some three percentage points.

These underperformers arguably should not even be considered shopping centers, as they can no longer compete for tenants with more successful centers. Indeed, many failing centers are occupied by government offices, churches, post-offices, and other non-traditional users. Yet for a variety of reasons – cities’ reluctance to part with sales tax revenues, owners’ unwillingness or inability to fund needed redevelopment costs – obsolete shopping centers typically take many years to finally expire or be converted into more productive uses. Thus, the retail sector has a disproportionate share of “zombie centers” that distort the indicated performance of more typical assets when included in the “average” performance data.

Rent levels show even larger and growing gaps between the superior centers and inferior centers. These dynamics make careful asset selection especially important for investors in the retail sector. To assess how these trends might evolve as the internet and other forces transform the retail landscape, we start with an overview of internet retailing trends.

E-Commerce Sales and Trends

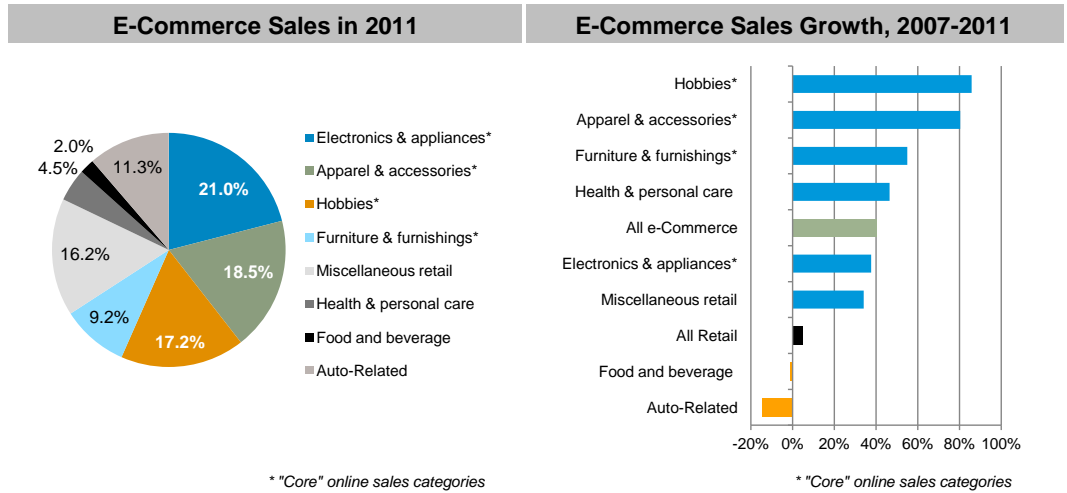
Despite a decade of steady growth, e-commerce still accounts for a relatively small share of total retail sales. However, these low figures are distorted by several retail categories whose products are rarely purchased online. The online shares are much higher in key retail segments more amenable to e-commerce and also are growing much more quickly.

As anyone with a computer or smartphone can attest, online retailing is by now pervasive, penetrating every demographic group and retail segment to varying degrees. Some e-tailing can be attributed to new forms of goods and services with no direct analogue in the physical retail sector – think apps and online gaming. But for the most part, these internet-based sales are simply capturing market share of items that previously were sold either through catalogues over the phone or by traditional bricks-and-mortar retailers in physical stores.

Census Bureau data shows that e-commerce sales in the United States amounted to more than \$193 billion in 2011, or \$178 billion excluding various types of non-merchandise receipts.⁴ Online sales are up fully 40% since 2007, in sharp contrast to less than 5% growth overall sales growth. Excluding auto-related purchases – little of which transact either online or in traditional shopping centers – e-commerce last year totaled \$158 billion, up 53.0% since 2007, compared to 7.6% for total non-auto sales, i.e., online sales have been growing about seven times faster than overall retail sales.

More than half of e-commerce is dominated by just three retail segments: electronics, apparel, and hobbies.

More than half of e-commerce is dominated by three merchandise categories: electronics & appliances (21% of all sales), apparel & accessories (18%), and various hobbies, especially books and music (17%). Automobile purchases & auto parts has the next largest share (11%), followed by furniture & furnishings (9%). No other category accounts for as much as 5%. The dominant segments are generally also the fastest growing, led by hobbies, apparel, and furnishings, all up by more than 50% since 2007. The relatively small health & personal-care segment also has been growing rapidly, while electronics growth has slowed somewhat.



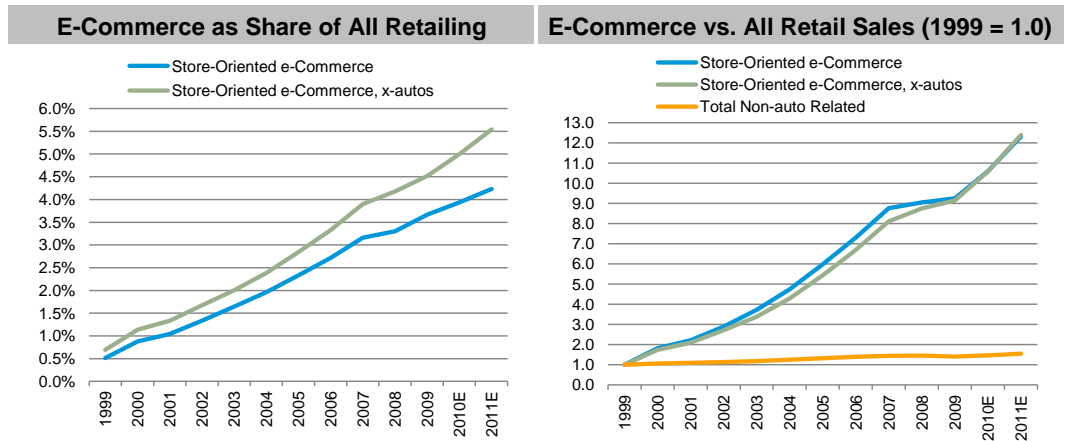
Sources: U.S. Census Bureau and RREEF Real Estate. As of December 2011.

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Internet Retailing in Context

Despite a decade of strong growth, online sales still account for only 5.5% of non-auto sales.

As with shopping center data, standard data sources provide a distorted view of trends and conditions – in this case, incorporating retail channels and segments that understate online's growth and market capture. Based on our calculations and adjustments, RREEF Real Estate finds that e-commerce accounted last year for only 4.2% of "store-oriented" retail sales in the United States.⁵ Excluding automobiles and gasoline, the e-commerce share is still a modest 5.5% of retail sales. This industry estimate is broadly consistent with recent Citigroup estimates based on top retail chains, which concludes to an online penetration rate of 4.6%.⁶



Sources: U.S. Census Bureau and RREEF Real Estate. As of December 2011.

Sources: U.S. Census Bureau and RREEF Real Estate. As of December 2011.

Bricks-and-mortar retailers should take little comfort in these figures, however, for two reasons. First, the non-auto online share of retail sales has been growing rapidly and consistently, by almost 0.40 percentage points per year since the Census Bureau began tracking Internet retailing by merchandise line in 1999. In sum, e-commerce sales have risen more than 12-fold since 1999, compared to barely 50% for retail sales overall.

Excluding goods shoppers rarely buy online, the online penetration rate doubles to over 10%.

The second concern for physical stores is that the e-tailing penetration rate is much higher, excluding retail categories that do not (yet) lend themselves to online transactions:

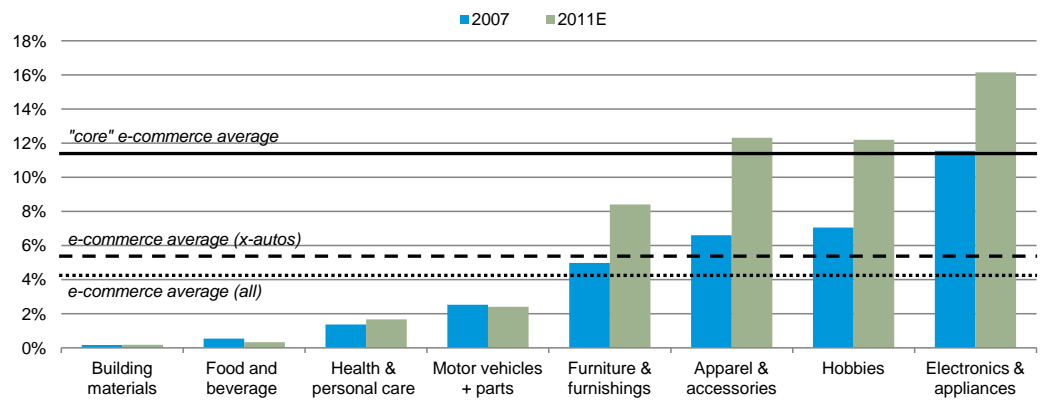
- products that have a low value relative to shopping costs (e.g., building materials);
- expensive items for which on-site assessment is crucial (automobiles and diamonds);
- less expensive items for which personal selection is still important (produce at a grocery store); and,
- products purchased frequently in small quantities or values (personal-care items).

We identify four categories of merchandise – building materials, groceries, health & personal-care items, and motor vehicles & parts – that are rarely purchased online, and thus have much lower online market shares within their categories. By contrast, the more internet-oriented categories have much higher online market shares. Focusing on these “core” e-commerce categories – hobbies, electronics, apparel, and furniture – the internet penetration jumps more than two-fold to 10.5% (and even higher within some categories), compared to 2.0% for the non-core lines. Online sales in the core segments are also growing much more rapidly. This core group added over one percentage point of market share annually since 2007, while market share in the non-core categories have been essentially flat.

The fastest growth in online sales is in apparel, hobbies, and electronics.

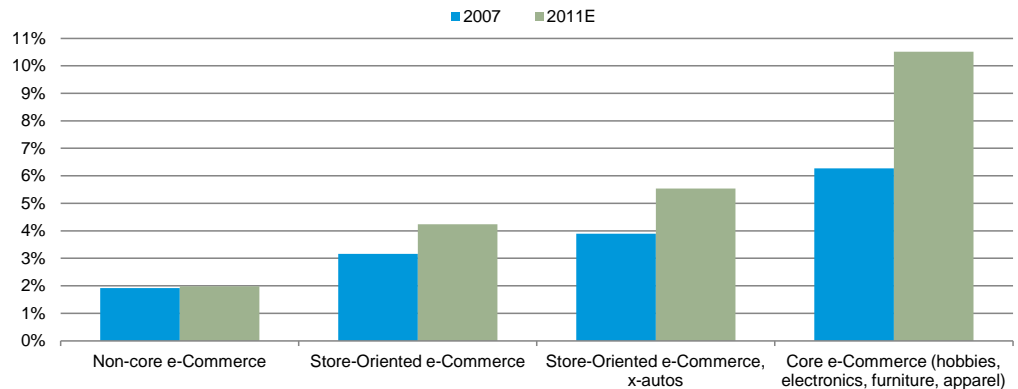
Apparel has made the greatest strides since 2007, increasing its market share by 87%, followed by hobbies (including books) which grew 73% and furnishings, which grew 69%. Electronics, which started with the greatest market penetration, grew by a more modest, but still significant, 40%. Health & personal care grew by 22%, while the other on-core categories were flat to negative. Notable for its counter trend is the food & beverage category, in which the internet share of grocery sales fell 39% between 2007 and 2011, reflecting the flameout of early pioneers in grocery delivery and consumer disenchantment with the service.

**Online Sales as Share of All Retail Sales
Detailed Merchandise Categories - 2007 vs. 2011**



Sources: U.S. Census Bureau and RREEF Real Estate.
As of December 2011.

Online Sales as Share of All Retail Sales General Merchandise Categories - 2007 vs. 2011



Sources: U.S. Census Bureau and RREEF Real Estate.
As of December 2011.

Pure Play vs. Store-Related E-Commerce

Another issue of concern to retail property owners and physical retailers alike concerns the extent to which online sales are captured by “pure-play” internet retailers with no physical presence (e.g., Amazon and eBay) versus those associated with bricks-and-mortar retailers. The distinction is crucial due to the phenomenon known as “showrooming”: when consumers use stores to evaluate goods in person, and then go online to purchase for a better price. With the advent of smartphones, shoppers increasingly buy online while still in a store!

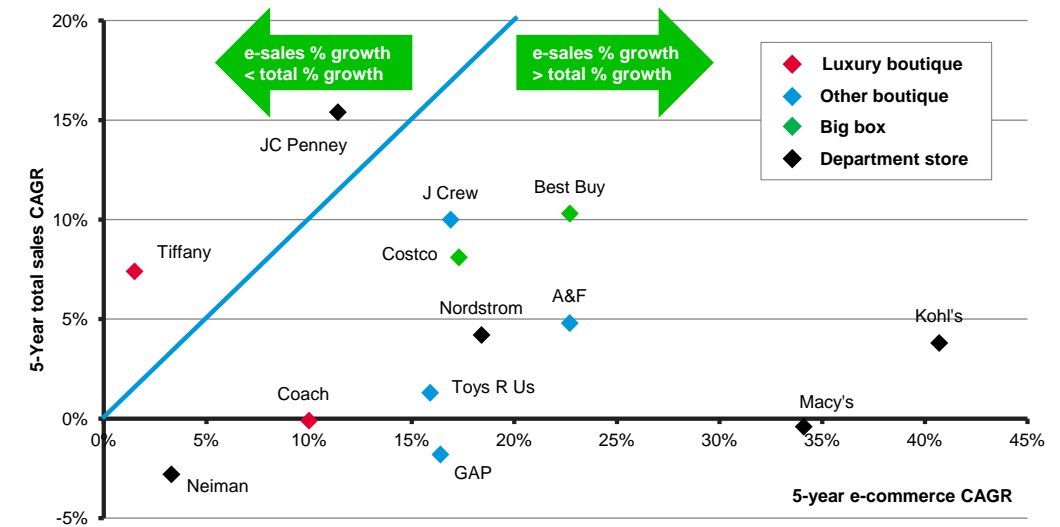
For the retailers, it is perfectly acceptable, maybe even preferable, if shoppers purchase using the store’s own website. However, it is another thing altogether when they ultimately buy from a competitor, whether down the street or online. In economics jargon, stores are at risk of becoming a “public good”: a service that benefits everyone but that no one will pay for freely. If showrooming keeps growing in popularity, there might not be enough shoppers willing to pay the price premium to experience the product in person for retailers to justify their physical presence. Then no one could shop in person. We’re clearly not there yet, but there’s no doubt that showrooming is becoming more common, visible and disconcerting to shop owners.

Comprehensive industry data on sales capture by “pure play” versus “multi-channel” retailers is not available.⁷ To gauge general magnitudes, we examined recent sales growth among 13 major retailers, which cut a broad cross-section (if not a precise representation) of the retail sector. Over the past five years, all but two – both luxury boutique chains (Coach and Tiffany) – saw faster online than in-store sales growth. Excluding the two luxury retailers, the other 11 retailers grew an average of six times faster online than overall (unweighted average). The smaller base of online sales accounts for part of this differential: a given absolute increase in sales yields greater percent growth for online sales than in-store.

Retail chains are capturing a significant share of e-commerce.

Still, the trend to online is clear, with e-commerce accounting for an ever-greater share of sales volumes of traditional retailers. This analysis also suggests that the nation’s retail chains are capturing a significant share of e-commerce as their online sales growth seems to be keeping pace with overall growth in online sales for the entire sector.

Total vs. E-Commerce Sales Growth at Key Retail Chains Compound Annual Growth Rates 2006-11



Sources: RetailSails.com, company filings, RREEF Real Estate.
As of December 2011.

Additional evidence can be gleaned from analysis of the biggest e-commerce players. Of the top 25 online retailers as compiled by internetretailer.com, 17 have significant store networks (led by Staples, Apple, and Walmart in the top five). Aside from three that offer products not typically sold in stores (e.g., business services), only five are pure-play internet retailers (Dell, Netflix, CDW, and HP, plus leader Amazon). Subject to more focused study, traditional retailers seem to be holding their own in the battle for e-commerce sales, at least for now.

Assessing Future E-Commerce Growth

Shifts from in-store to online shopping are likely to escalate greatly in the near term due to changing consumer shopping patterns and enabling technology from both pure-play and multi-channel players. Most impactful will be the soaring rates of consumer adoption and use of “mobile shopping devices”: smartphones and tablets.

Perhaps the paramount question facing the retail sector concerns whether growth in online retailing will continue to outpace in-store sales in the battle for consumer market share. Three recent studies suggest that the prospects for e-commerce are more favorable:

- Nielsen Consumer & Shopping Insights** projects that e-commerce will continue to grow at the expense of in-store retailing. Nielsen forecasts a compound annual growth rate (“CAGR”) for e-commerce of 8.5% between 2010 and 2016, far outpacing all other retail channels.⁸ Reflecting continued consumer focus on value, Nielsen sees club stores, dollar stores, and supercenters all growing between 4.5% and 4.9% annually. Meanwhile, Nielsen expects virtually all other retail store types to lose market share, with the “core” categories most vulnerable to online sales – hobbies, electronics, apparel, and furniture – all experiencing net sales losses. The relatively protected retail categories, such as groceries, health and personal care, and automobiles, should fair somewhat better.

- **Forrester Research** reaches an even more bullish conclusion, forecasting a 10.1% CAGR over the next five years.⁹ With online sales growth outstripping bricks-and-mortar, e-commerce will add nearly two percentage points of market share over this period. Forrester identifies several factors underpinning this growth: “consumers’ greater comfort level with purchasing various categories online, broader web shopping capabilities with mobile and tablet devices, innovative new shopping models that divert spending away from physical stores (e.g., flash sales, subscription models), online loyalty programs, comfort with online pay models, and aggressive promotional offers from web retailers.”
- Finally, a **Citigroup Global Markets** report is most bullish of all, at least through 2013, with a forecast of 15.3% gain this year and 14.3% next.¹⁰ Citi finds the growth drivers are: “current overall low penetration rates; the ongoing innovation efforts of leading Online Retailers (increased personalization, greater integration of Social Media tools in the Online Shopping experience, improved back-end logistics, and emerging Mobile commerce and Social commerce channels); and the increasingly active steps that Offline Retailers are taking to grow their Online channels.”

Our own view is that e-commerce growth prospects, absolutely and relative to traditional stores, will depend on a host of factors, not least of which are the evolving strategies of pure-play online retailers and adaptations from traditional bricks-and-mortar retailers. But ultimately shoppers will have the central role in determining the growth in online versus in-store retailing, so it is essential to understand consumer motivations for online shopping, as well as the technologies that enable it.

Why Consumers Shop Online

Many surveys on consumer attitudes toward online retailing have been conducted in recent years yielding varying results. But some clear patterns emerge: First, convenience is probably the greatest driver for e-commerce, in terms of both flexibility (ability to shop “24/7”) and time savings (avoiding shopping trips and drive time). Closely related to these is the ability to comparison shop easily while also avoiding crowds, particularly during holiday seasons. These factors almost always rise to the top in consumer surveys, cited by two thirds or more of respondents polled by Nielsen and Invesp.¹¹ The ability to get discounts or compare prices is also important for half or more of shoppers, while related issues such as saving gas and sales taxes are cited less frequently.

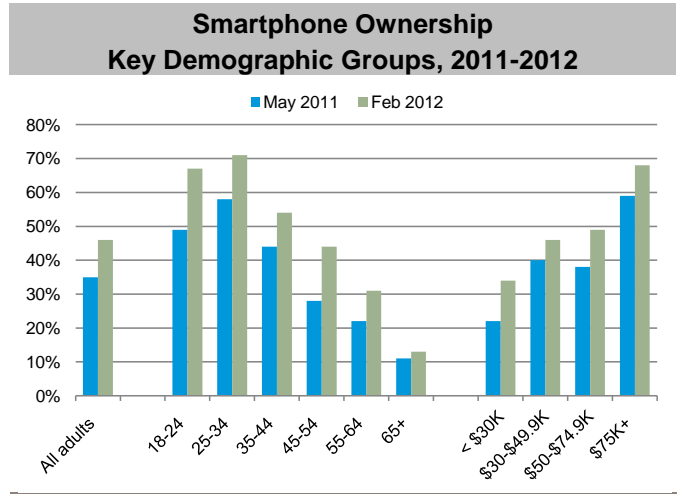
Device Ownership and Usage

We are now witnessing a huge and accelerating shift in the rates at which consumers adopt products and technologies that both enable and ultimately favor online transactions over physical stores. According to the Pew Research Center, almost half of American adults now own a smartphone, and the recent pace of uptake has been extraordinary: up 11 percentage points from 35% to 46% in the nine months through February 2012. The rates are even higher among key consumer groups, such as college-educated individuals and households with incomes of \$75,000+. Unsurprisingly, ownership rates are greatest among the young, including more than two-thirds of people aged 18-24 and 25-34, but ownership growth has pervaded almost all ages, growing at least five percentage points since mid-2012 in every demographic group surveyed, except seniors (aged 65+).

*Why shop online?
Convenience,
selection, price.*

*Smartphone and
tablet ownership and
usage are surging
across virtually all
demographic groups.*

The spike in tablet ownership is even greater. Pew estimates tablet ownership (excluding e-readers) almost doubled in the last six months of 2011, amounting to an estimated 19% of United States adults as of January 2012. To the extent that this survey was conducted prior to the March release of Apple's wildly popular third-generation iPad – which sold over three million units in its first weekend alone – these figures certainly understate the ownership rate, as many of the new iPads were sold to consumers buying their first tablet.



Sources: Pew Research Center and RREEF Real Estate. As of February 2012.

Perhaps most indicative of online's potential upside: households in the top 20% of incomes (roughly \$100,000+ in 2007) account for about a third of total retail sales, but for virtually three quarters of e-commerce sales (74%), i.e., these affluent households account for more than twice the share of online as overall retail sales.¹² Thus, we can expect another surge in online sales as less affluent households become more comfortable with the technology and begin to follow the shopping patterns of the affluent pathfinders. Indeed, Walmart is already targeting this segment with their "Pay With Cash" program, where customers without credit cards or bank accounts can reserve items online and pick them up in stores with product availability guaranteed. And to capture more affluent shoppers, the superstore is expanding its online-only selection of expensive items such as high-end televisions.

Product and Price Transparency

Mobile device owners are using their smartphones and tablets to help them shop. A recent Alix Partners survey found that smartphone and tablet owners increasingly use their devices for shopping research: choosing particular items, reading product reviews, or finding the lowest price.¹³ The same survey found that fully half of device owners use an internet search engine to find the lowest price and more than a third report using a dedicated price-searching app (e.g., Red Laser). Rates of mobile shopping research are predictably higher among younger consumers, but are rising quickly among all groups.

The impact on the retail sector of the ballooning mobile-device ownership and usage is at least three-fold: First, smartphones, and especially tablets, enable and even encourage product and price comparisons to a much greater extent than conventional phones ever could. Already a third of households admit to showrooming, with much greater rates among key consumer groups. ComScore finds that fully half of respondents aged 25-34 engage in showrooming, as do virtually half of tablet owners and 43% of smartphone owners.¹⁴ These figures are almost certain to rise with greater consumer awareness, technology advances, and societal acceptance, increasing the range of opportunities where it proves fruitful for consumers.

Smartphones and especially tablets are rapidly transforming consumer behavior and retailer business models.

Second, the iPad alone can be seen having a momentous impact. A new study estimates that iPad users now account for fully two-thirds of all mobile shoppers, driving an astonishing 90% of all m-commerce.¹⁵ iPad users are also three times more likely to purchase an item after visiting a website, and spend 50% more per item than users of smartphones and other tablets. Meanwhile, tablets already generate more web traffic than smartphones, with 95% of that attributable to the iPad alone.¹⁶ The iPad's singular force is clearly being felt at the mall.

Finally, as mobile-device ownership and usage expands well beyond the young and affluent, we can expect the impact on retailers to extend beyond the products and stores favored by these tech-savvy demographic groups to more downscale, price-sensitive retail sectors such as the warehouses and dollar stores. Combining these trends, increasing mobile ownership and usage, and more widespread showrooming, will certainly drive more shopping online, whether from the comfort of home or increasingly from the physical stores consumers use to assess merchandise. Moreover, the product and price transparency afforded by mobile technologies puts even more pricing pressures on physical retailers: either beat (or at least match) the online price or the shopper will walk out of the store empty-handed. Retailers are starting to combat this onslaught with lasers in the store to prevent handheld scanning apps from reading bar codes or by using unique product codes that make price comparisons more difficult – a ploy long practiced by mattress stores – but such tactics seem unlikely to succeed long term as new apps surely will be developed to neutralize these practices.

Emerging Technologies

Barely a few years old, mobile price-searching apps are now widely practiced. Alix Partners found that a fifth of smartphone owners aged 65+ already use a shopping search engine such as PriceGrabber or NexTag, so these tools are hardly cutting edge, even if their use is only now taking off.

But with the huge stakes at play in restructuring the physical and virtual retail landscape, even more disruptive technologies are emerging, fed by the vast sums of capital being invested in this arena. Venture capital funding for mobile technology rose almost 40% last year to \$6.3 billion and now accounts for over 40% of all tech venture capital – double that of only two years ago.¹⁷ Among the biggest segments: \$592 million in mobile marketing and advertising (a five-fold jump from \$128 million in 2010) and \$558 million in mobile commerce and payment systems (more than twice the \$276 million invested in 2010).

These early-stage investments only hint at the total investments in mobile technology and e-commerce generally, and exclude the considerable late-stage investments in more applied technologies that are being adopted by retail chains and online retailers today. Most of the new technologies are designed to enhance the online shopping experience, and, as such, favor e-commerce over in-store retailing. These include:

- virtual dressing rooms, which includes different approaches that enable online shoppers to visualize how apparel would look on them (e.g., Zugara and Fits.Me);
- fashion feedback apps that allow shoppers to upload photos in a new outfit for peer feedback from friends or even strangers; and,
- social networking sites (e.g., Pinterest) hosting theme-based image collections that can also serve as virtual storefronts for online retailers, generating leads and sales, and allowing consumers to effectively bypass traditional merchandising channels.

The fight for online sales is on: funding for mobile technology now accounts for over 40% of all tech venture capital.

Another disruptive model is represented by “flash-sale” websites, which offer deeply discounted products for a limited time. Though at least a decade old, these websites gained popularity with manufacturers and consumers alike during the recession as a way of moving unsold luxury apparel and accessories. The largest names include Gilt, Rue La La, Groupon, HauteLook and Ideeli. Press reports suggest these sites are losing their appeal as manufacturers no longer have the huge backlogs of unsold merchandise.¹⁸ However, Amazon has just activated their MyHabit fashion website that combines the discount orientation of the flash-sale sites with a glossy variation on virtual dressing rooms, in which the merchandise is demonstrated on live models. While it is too early to know how successful this “MyHabit” venture will be, Amazon is making a high-profile investment to crack the fashion market.

E-Commerce by the Retail Chains

Multi-channel retailers are fighting back with mobile technology of their own seeking to help level the playing field. While the amount of these investments is unknown, anecdotal evidence suggests it is considerable, displacing capital that formerly would have been invested in new stores and inventory. Walmart alone spent \$300+ million acquiring five tech firms to support its online initiatives while also hiring some 300 engineers and programmers – this coming from a company that derives only 2% of its sales online.¹⁹ Similarly, Nordstrom is allocating 30% of its capital budget this year, or \$140 million, to technology investment.²⁰ Perhaps even more telling: half of the largest retailers reportedly already create their own iPad apps.²¹

Among the most promising apps are online payment systems that speed transactions in stores. Apple has pioneered in this area, streamlining purchases in their stores to be as seamless as buying online, coupled with the benefit of immediate product delivery. What began with the novel concept of mobile checkout – the clerk comes to the shopper, effectively eliminating checkout lines – has now evolved to where the shopper need not even interact with a salesperson. Using Apple’s shopping app, customers can purchase items simply by scanning product codes with their smartphone camera. The charge for the merchandise will then post to the credit card associated with the shopper’s Apple ID. Food and beverage vendors are getting into the act, too. Starbucks has a smartphone payment app that links a customer’s Starbucks card and reward program. Consultant Ernst & Young projects that mobile payment services will hit \$245 billion worldwide by 2014.²²

Retailers are also testing new location-based marketing technologies. Innovative applications include geofencing, in which shoppers can receive targeted marketing from stores or shopping centers when they enter the geographic area. This may include rewards, in-store promotions, or coupons that may not be available online from retailers. Target utilizes Shopkick to reach nearby customers, while American Eagle, Kmart, The North Face, and Starbucks are testing geofencing to lure customers into their stores. Mall owner DDR has deployed ValuText to text customers in all of its shopping centers with deals from their retail tenants.

Geofencing technology is still new, and it remains to be seen how widespread or effective the application will be in combating more proven advances in online technologies. To date, relatively few customers seem to use their mobile phones for functions to the advantage of the brick-and-mortar retailers, such as in-store promotions. Snapette might represent the next wave of location-based shopping apps for retailers by sending personalized product recommendations and deals to shoppers via push notifications that don’t require the consumer to open up an app.

Retail chains are redeploying their scarce capital from store openings to e-commerce apps to compete with pure-play retailers.

Bricks-and-mortar chains must differentiate themselves from pure-play retailers to reduce price-matching pressure.

Chains use their own stores as showrooms for their e-commerce divisions, carrying a wider range of products and deeper stock online.

Finally, retailers must get back to basics: leveraging the advantages of the physical store – immediate product delivery and the tactile and visual sensory experiences that can't be duplicated online. Nordstrom has long been known for its attention to customer service. In their quest to further serve shoppers, Nordstrom has installed Wi-Fi in their stores and has made iPads available for customers to freely browse to comparison shop, check email, or order products not available in stores. Nordstrom is even testing same-day delivery in select markets for a nominal fee. Shoppers can thus fully assess the product in the store and then have the purchase waiting for them at home, even if the particular store was out of stock in that item. In this way, a retailer's portfolio of stores and warehouses in a region effectively operate as a showroom/delivery network. A new iPad app called Revel Touch aims to extend this service across the industry.

In effect, the multi-channel retailers use their own stores as the showrooms for their e-commerce divisions, carrying a much wider range of products and deeper stock of size/color combinations online. Home Depot reportedly carries under 50,000 SKUs in a typical store but more than 400,000 items online. Moreover, with items stored in warehouses – or virtually in their suppliers' warehouses – rather than expensive store space, retailers save on their occupancy costs at the same time they provide greater product selection to their customers.

Retailers are adopting a variety of innovative multi-channel strategies for driving traffic to both their stores and websites.

Retailers have implemented still other innovative multi-channel strategies for driving traffic to both their stores and websites. Kohl's has been rolling out its in-store kiosk program, which allows shoppers to search inventory for out-of-stock items at the Kohls.com website. As an extra incentive to attract shoppers into their stores, Kohl's offers free standard shipping when an order is placed via the kiosk, while regular shipping rates apply for orders placed via standard online channels. Similarly, Walmart is implementing its "endless aisle" strategy in which shoppers are encouraged to use their own smartphones to shop on the Walmart.com website when a desired item cannot be located in the store. Among the multiple benefits to retailers from these programs: shoppers are more likely to purchase additional items once in the stores, while the retailers can reduce in-store inventory (and ultimately store sizes).

In Defense of Stores

Technology can replace only so much of the natural need for physical gathering places provided by shopping centers.

Beyond these retailer strategies, several strong forces will ensure the enduring importance of physical stores and shopping centers, no matter how compelling the online model. To start, there are the social aspects of shopping – the original social networking forum – that will also serve as natural governors on e-commerce. Shopping centers and districts traditionally have served important functions as community crossroads and meeting places. No doubt, social networking technology is redefining this function and reducing the need for in-person contact, particularly for younger shoppers. But our bet is that technology can replace only so much of the natural need for physical gathering places.

Second are logistical constraints. There are good reasons commerce evolved over the centuries to a model where consumers go to stores, rather than merchants come to consumers. The internet reverses the product-selection paradigm by bringing commerce to the consumer. While product selection and ordering are often more efficient, product delivery is still the weak link in the online transaction, particularly the "last mile" (from distribution center to the consumer). The upward limit on online retailing cannot be known, but as the

online penetration rate races past 10%, the capacity of our nation's roads and neighborhoods to handle the additional traffic remains a potential barrier.

Logistical constraints and road capacity may be the greatest limits to online retail expansion.

One controversial issue concerns the decade-long battle over taxing online transactions. Due to a combination of legal and logistical constraints, sales taxes are rarely collected on online sales. This disparity can provide e-tailers with a pricing advantage of 5% to 10% depending upon the locality, and deprive state and local governments of critical revenue. To fight back, many states have joined with the shopping center industry to lobby for "sales tax parity" with online retailers that would restore the competitive balance for bricks-and-mortar retailers. Meanwhile, individual states have begun negotiating sales tax agreements with major retailers, including over a dozen with Amazon alone.

Shopping center owners and local governments are united in seeking sales-tax parity for in-store and online sales. The impact would be limited.

It seems inevitable that taxes ultimately will be collected for internet-based sales, so at least a portion of the online pricing advantage would disappear. Would it matter? To a limited extent, but taxing e-commerce would be no panacea for physical retailers, as taxes are not nearly the top consideration for most online shoppers. At best, online taxes would slow the e-commerce tide for the most cost-conscious consumers and price-sensitive retail segments.

Finally, help might be coming from an unlikely source: product manufacturers. Stung by relentless price competition in major retailing categories, particularly electronics, manufacturers are starting to follow the model of leading high-end appliance makers by suggesting minimum sales prices, which encourages retailers to compete on service than price.²³ Minimum prices not only help preserve profit margins for manufacturer and retailer alike, but also restore competitive balance to physical stores, which can provide a more complete experience for shoppers. Potential growth of this practice is hard to assess. For one thing, such pricing schemes can crumble quickly if not enough players participate. Also, regulators take a dim view of such pricing schemes if there is any suggestion of collusion, as evidenced by the recent suit filed in the selling of e-books. Still, this is a trend that bears watching as potential relief for physical retailers in especially impacted segments.

Conclusions on Future Growth

Given all of these factors – and especially the exploding adoption and usage of mobile commerce tools – there can be little doubt that online retailing will grow even more rapidly in the next few years, much of it at the expense of bricks-and-mortar. Although we find that e-commerce's market share is considerably higher than typically reported in standard industry data, these penetration rates are still quite modest at about 10% to 15% of total sales, even in the merchandise categories more amenable to online shopping. Consumers clearly could support significantly higher rates in the near future, and emerging technologies should enable the online industry to satisfy this demand.

Online retailing will grow even more rapidly in the next few years, much of it at the expense of traditional stores.

Based on the foregoing, we conclude that the online share of retail sales growth in the near term will be no less, and likely more, than in recent years. Were e-commerce sales to continue growing five times faster than overall sales – a conservative assumption – the online share of sales would double within five years, to 11.3% of all retail sales excluding auto-related (up from 5.5% in 2011), while the share in the "core" categories (electronics, hobbies, apparel, and furnishings) would double to 21.3% (from 10.5% now).

Implications for Retail Real Estate

The rising tide of internet shopping will have profound impacts on the shopping center industry, reinforcing trends toward greater emphasis on store productivity over growth. Retail chains will have smaller and fewer stores, situated closer to their customers. The winners will be the best-located malls, main-street shopping districts, and grocery-anchored centers, while big-box retailers will begin a long period of decline.

The growing channel shift to online shopping has significant downstream real estate implications. One perspective is to translate online sales into supportable retail space. Our calculations show that the \$157 billion in e-commerce sales last year, exclusive of automobile purchases, would be equivalent to between 350 million and 500 million square feet of GLA based on typical sales volumes. Thus, the sales generated online could otherwise fill about a third or more of the vacant retail space in our nation's shopping centers and retail districts.²⁴

This calculation is not to imply that all of these online sales could be attracted into physical stores. Much of this e-commerce never made it into the malls and power centers to begin with. Mail-order houses and other non-store retailers have long occupied a significant place on the retail landscape. However, with rising internet usage and consumer comfort with online transactions, e-commerce clearly is displacing mail-order as the preferred means of nonstore retailing, though in many cases the migration is just internal to the same entity, with sales being transacted by clicks rather than calls. The larger point is that e-commerce is diverting an ever-larger share of consumer spending away from physical stores.

The New Retail Mantra: Fewer and Smaller Stores

Retailers are rethinking their physical strategy. As discussed in RREEF Real Estate's 2009 paper, retail chains are downsizing their store counts and sizes, both of which had been growing grossly ahead of market fundamentals. For the last generation, chains put market share ahead of profitability in hopes of reaching scale and segment dominance, but this expansion was not sustainable. Sales volumes per unit of store area were falling even before the recession as retailers stretched to increasingly distant and sparsely-populated markets. Store sizes also ballooned in the belief that the greater selection of goods would disproportionately capture sales, giving rise to so-called "category killers," the dominant chains in each product category – Best Buy in electronics, PetSmart in pet products and so on. Eager developers and accommodating lenders compounded the excesses.

All this changed rather abruptly when the frothy waters receded in the recession, leaving inferior markets and bloated store prototypes looking very exposed. The new mandates became repairing balance sheets, restoring profitability, and growing sales productivity. Bleeding cash and losing customers, chains began closing stores and abandoning markets, driving up shopping center vacancy rates in their wake, particularly in secondary markets.

Retailers also began to shrink store prototypes after years of relentless growth. For all the importance of store sizes, there is no industry-wide data on this issue. However, we can gauge store size trends by comparing changes in the number of retail establishments with changes in occupied retail space. As shown in the following graph, occupied retail GLA has been handily outpacing store growth, yielding sharply larger store sizes – up 46% since 1983 and 12% in the last decade alone. This growth reflects at least three factors:

Chains are reducing store counts and sizes as they focus more on productivity than sales growth.

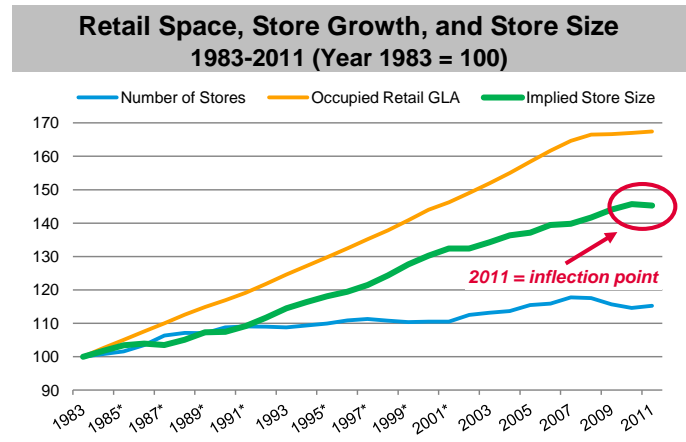
After decades of relentless growth in store sizes, chains are finally shrinking store prototypes.

- larger store prototypes for individual retailers of all types;
- greater retail growth in suburban and exurban markets, where store sizes tend to be much larger than in denser urban areas; and,
- the shift in sales away from local “mom and pop” retailers and toward supersized warehouses, discounters, and other big-box retailers.

This inexorable growth continued year-in, year-out over the past 30 years – until 2011. This upsizing occurred even as retailers were reducing their inventories. The inventory/sales ratio in the retail sector has declined 20% since 1992, 31% excluding autos and groceries (categories in which retailers have less flexibility in reducing inventory). Which raises the obvious question: just what were retailers doing with all this extra store space? Not much, it seems, as sales productivity declined along with inventories.

Despite much talk of smaller footprints in response to the recession and other pressures, store sizes actually continued to inch up in 2008, 2009, and 2010. For one thing, there was greater financial distress, and hence more

store closures, among the small, local retailers than among larger, better-capitalized chain stores. But store sizes finally shrunk last year. While the decline in average size was slight, it nonetheless marks a significant inflection point. Like an ocean liner reversing course, it will take a while for big-box store closures and smaller store prototypes to make an appreciable dent on overall averages for chains having hundreds, even thousands of locations. But 2011 will, we believe, mark a turning point, as evidenced by the many chains that have announced moves to smaller stores and greater growth (or less reduction) in their smaller prototypes.



Sources: CoStar (Retail GLA), Bureau of Census (Stores), RREEF Real Estate. As of December 2011.

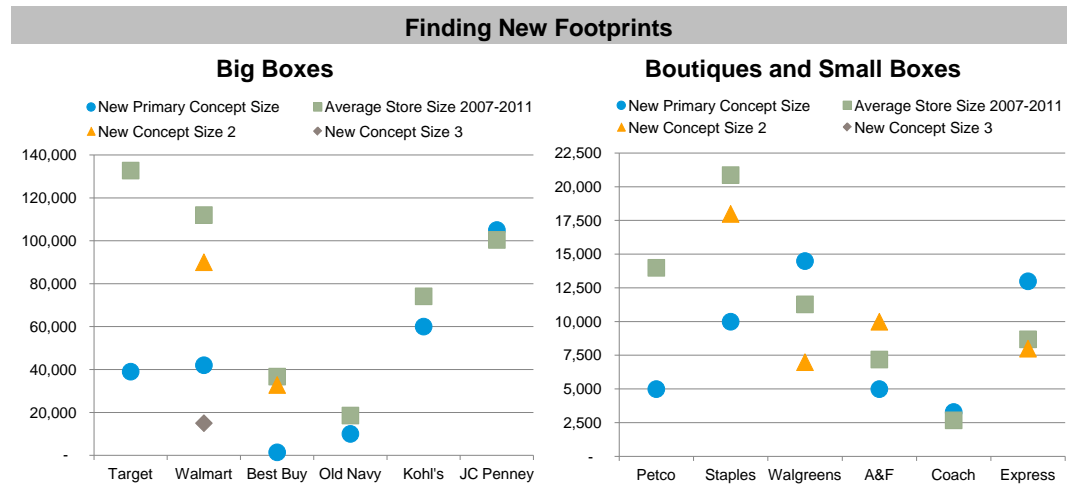
New Store Location Paradigms

We have identified at least five distinct strategies being tested or adopted by retail chains that involve some variation on the “fewer, smaller stores” theme:

- portfolio rationalization
- the urban strategy
- flagship stores in high-street retail districts
- consolidating brands under one roof
- store within a store

RREEF Real Estate examined trends in recent store sizes of more than a dozen national chains, as summarized in the following graphics. In almost every case we are seeing smaller sizes for the new prototypes (typical store format) or store concepts (stores designed for a specific new location or strategy, such as Walmart’s new Express and Neighborhood Market

stores that represent additional prototypes rather than replacements). These size reductions can be dramatic, with stores sometimes half the size of their predecessors or less.



Sources: RetailSales, company reports, RREEF Real Estate.
As of June 2012.

Not all of these concepts and prototypes can be linked directly to online sales capture, but all are emerging in this era in which retailers face market demands to serve their customers as efficiently and effectively as possible. Global pricing markets heighten the pressure, particularly in this post-recession environment in which shoppers are more price sensitive and savvy about money-saving options. Retailers are responding by shrinking their stores while developing strategies to enhance sales productivity to maintain overall volumes in the smaller spaces, saving on rent, staffing, utilities, and other operating expenses.

Portfolio Rationalization: Smaller is Better

In this most widely adopted strategy, chains seek to improve the productivity of stores through a combination of closing underperforming stores and downsizing store prototypes. Abercrombie & Fitch, the Gap, and Best Buy all have announced plans to close underperforming stores at the same time they are pushing more sales online and still selectively opening new stores. The Best Buy example is perhaps the most illustrative, if extreme. Best Buy is closing 50 full-line stores (generally 40,000 square feet+) at the same time they are testing new, smaller “connected” prototypes and opening 100 new 1,000-square-foot Best Buy Mobile stores that focus on smartphones and tablets. Their goal is a 20% reduction in floor space. Meanwhile, the Gap and Abercrombie have affirmed their goals to enhance store productivity over “growth at any cost,” focusing on the best locations for their stores.

Even when chains are not cutting back on store counts, their new focus is on raising productivity by reducing stores sizes for new prototypes. Retailers often find they face only small sales losses when cutting back on the amount and range of merchandise at their stores – no need to stock every color in every size – so long as they can fulfill the delivery promise, as Nordstrom is proving. Other chains are starting to follow suit.

The Urban Strategy

One maxim of store location strategy is to simply follow the rooftops. Since World War II, that has meant following the migration of the nation’s households into suburban and even exurban

Chains are closing underperforming stores to focus on top markets and centers.

markets, while urban areas were largely ignored. Beyond population growth, these suburban areas typically offered higher household incomes and easier land assembly and permitting for developers; retail chains found it easier to grow with simple stock prototypes in new suburban shopping centers than in existing, oddly-shaped city stores.

The excesses of the last expansion revealed the risks in this strategy as retail development often preceded the population base that could support it. Retailers also began to realize that highly-segmented land-use patterns in suburban markets also limited retail demand, with shopping centers often far removed from daytime populations. At the same time, retailers began to rediscover the benefits of urban markets, which offer much greater population density as well as demand from office workers, tourists, students, and others. Retailers also appreciate the demographic shifts favoring urban areas: from aging baby boomers downsizing their households to Gen Y Millennials seeking more diverse living environments.

Retailers are rediscovering the benefits of urban markets: higher profile and closer to consumers.

As if the blinders were suddenly removed from their collective eyes, retailers are now seeing cities as untapped markets hiding in plain sight. And the stores they put in these infill locations are almost all considerably smaller than their suburban counterparts. Walmart is rolling out its Walmart Express format at just 15,000 square feet, compared to its normal prototype of close to 200,000 square feet. Similarly, Target developed a new CityTarget format, sized at 60,000 to 100,000 square feet, compared to over 130,000 for its typical suburban stores.

Another variation on the urban strategy is to go more upscale and specialized in the infill locations. Petco's new Unleashed urban format is a more affluent concept in a much smaller box than its typical full-line store, while Sport Authority is opening its S.A. Elite format with a more upscale, specialized fitness concept, which are about half the size of its typical footprint.

Flagship Stores

Consistent with the urban strategy, retailers are recognizing the benefits of establishing large flagship stores in the best shopping districts of prominent cities. High-street retail long has been the predominant retail strategy in Europe, but in the United States such locations typically were limited to small boutiques of the most upscale designers and jewelry stores: Tiffany, Bergdorf Goodman, and the like. No longer. Fifth Avenue in New York, Michigan Avenue in Chicago, Union Square in San Francisco are all now filled with a broad array of outsized flagship stores for mainstream brands like Abercrombie & Fitch, American Eagle, Uniqlo, and Nike.

Flagship stores provide chains with high-profile locations to promote their brand.

While these stores generate huge sales volumes that alone can justify the eye-popping rents – now topping \$2500 per square foot annually for ground floor space along Fifth Avenue – retailers also count on the public relations value of these stores to drive sales for the entire chain and especially online. Retailers will attribute a portion of rents to marketing budgets. This strategy allows for a handful of prominent flagship stores in key markets around the globe to carry the brand, while shrinking the store fleet in less profitable secondary markets.

Multi-Brand Stores

Finally, retailers are experimenting with bringing multiple brands under one roof. The Gap and Toys R Us are both adopting prototypes in which their multiple flags (e.g., Banana Republic, Baby Gap and Old Navy for the Gap) in order to encourage cross shopping across their brands and reduce restocking costs and rent for the combined flags. Another strategy is the

“store-within-a-store” format in which one retailer co-locates within others. For years boutique clothiers have been taking space within department stores, but now the concept is being extended. RadioShack is testing a format in OfficeMax stores and Target, as is Apple within Walmart, and Scrubology in Sears and Kmart, among many others. This trend should continue as the store operators look to best utilize excess space and broaden product offerings. The common theme here is that retailers can expand their reach at much lower expense and in much less space than by simply adding more standalone stores.

The Future of In-Store Retailing

Online retailing represents the best of two worlds: the outstanding product selection of the category killers (which typically have competitive, though not discount, pricing) with the budget pricing of the discounters (which typically have limited product selection at rock-bottom prices). However, online shopping cannot match the more tactile shopping experience and social interaction of in-store retailing.

Thus, we can expect that e-commerce will bring ever more intense price pressures on retailers that cannot offer a differentiated shopping experience through superior service or unique product offerings. Looking beyond the inevitable failures among the retailers that cannot adapt quickly and extensively enough, some types of retail space will benefit more than others. Dominant regional malls and high-street retail stand to gain, reaffirming their role as the preferred venue for retailers and shoppers alike. These centers and districts serve as community crossroads, which has always been a crucial function for commercial areas. They also provide retailers with the visibility they need to build their brands.

Indeed, these shopping centers and districts should gain not only market share and occupancy, but also see better operating performance. If stores can maintain their sales volumes in smaller stores, landlords should be able to charge higher rents per square foot of space, while also fitting more stores into their centers.

Commodity Retailing

On the other hand, power centers, big-box retail generally, and weaker centers will fade, particularly those in secondary locations. The future of these price-sensitive product categories can be seen in the recent experience of office supply stores – a product segment particularly vulnerable to the threat of online sales, with relatively undifferentiated products that are inexpensive to ship. Based on the leading retailers in the segment, we estimate that at least a third of office supply sales are now transacted online. This channel shift has forced (or allowed) the retailers to shrink their physical presence with fewer and smaller stores. Staples, the sector leader, is reducing its prototype store size from 18,000 square feet to 16,000 or less. More dramatically, Office Depot is testing an 18,000-square-foot store, down from its current prototype of 27,000 square feet. While seeking to reduce their occupancy costs and raise store productivity, these smaller stores reflect the extent to which sales have moved online.

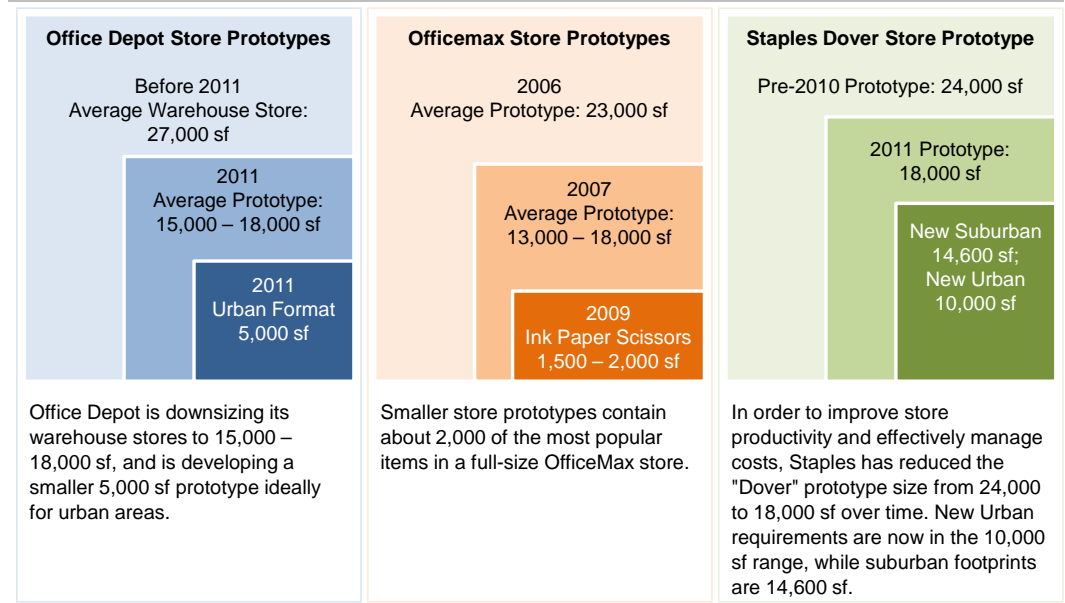
We can also expect e-commerce to reinforce the bifurcation of retail markets, with more in-store retailing going to discounters at the low end and luxury retailers at the high end. The former will compete more on price, the later on service and unique products. Those in the middle will be squeezed, unable to offer either competitive pricing or a differentiated offering.

E-commerce will continue to pound retailers unable to deliver superior service or unique products.

Smaller, more productive stores can translate into higher rent potential for superior centers.

Commodity retailers, especially big-boxes, will be especially vulnerable to online sales loss.

The Shrinking Office Products Store



Sources: Company filings, RREEF Real Estate.
As of June 2012.

Groceries and Personal-Care Items

Holding up better will be community centers with top grocers and service-oriented tenants with products not easily transacted online. Several factors limit the potential for expanding online grocery shopping, most of which are not easily fixed with technology.²⁵ Among the reasons: “purchasing produce is a tactile process,” while “fish and meat are best purchased by sight.” Equally important is the execution. Online grocery shopping offers limited cost advantage. The consumers’ need for quick (almost instant) and on-time delivery and product freshness means grocers must locate their warehouses close to their consumers in the same congested, high-rent districts. Any cost savings afforded by having the product in a warehouse rather than a supermarket would be more than offset by the substantial handling and delivery costs.

That said, online grocery shopping is more prevalent in other countries, particularly the United Kingdom, suggesting upside potential for this category. One approach gaining favor is the drive-through model pioneered by French supermarket Auchan’s Le Drive. Consumers shop online and then pick up their order, which addresses two key issues for online grocery shopping: delivery costs are eliminated and customers gain the opportunity to return undesired items easily. Despite only limited experience, this model could point the way toward more expanded online grocery shopping in the future, particularly for higher-density metros in which grocery shopping can be challenging due to limited parking and smaller stores.

For now the grocery segment seems relatively protected from the e-commerce onslaught, as are full-line drug stores selling prescriptions and personal-care items. The same goes for the service-oriented tenants typical of neighborhood centers: cleaners, restaurants, beauty salons and the like. But the Auchan example demonstrates that even the retail categories least amenable to online shopping using current technology and business models could quickly find themselves losing sales online with shifts in the operating environment.

Conclusions

Despite improving health in the retail sector, nearly a tenth of shopping centers are already obsolete; e-commerce stands to double this redundant retail space within a decade. Online sales are growing some five times faster than total retail sales, a trend we see only accelerating with greater consumer adoption of mobile technology and more widespread usage of shopping apps, and encouraged by retailers themselves who see opportunities to reduce their operating expenses. Though the online share of sales is still small, at expected growth rates it will quickly reach more meaningful market shares: at least 10% of all non-auto retail sales by the end of 2017, and 25% within the categories most inclined toward e-commerce. Perhaps the only uncertainty is how quickly the online model will spread to other retail categories such as groceries and personal-care items.

As in any commercial revolution, there will be winners and losers among industry participants. Looking beyond the inevitable failures among retailers that cannot adapt quickly and extensively enough, some types of retail space will benefit more than others: dominant regional malls and high-street retail stand to gain, as do community centers with top grocers, food, and service-oriented tenants. On the other hand, power centers, big-box retail generally, and weaker centers will fade, particularly those in secondary locations.

The threat to retail *chains* posed by showrooming and mobile commerce generally is overstated to the extent that in many cases the retailer will capture sales online that they previously might have transacted in a store – assuming they are price-competitive. Indeed, some chains even encourage online sales, which cost them less. But the threat to retail *landlords* is undeniable. With more focus on improving sales productivity, retailers are reducing their physical presence, leasing fewer and smaller stores and leaving more merchandise in less-costly warehouses for direct shipping to their customers. The collective loss in leased retail space will be considerable. Owners of inferior shopping centers should be very, very concerned.

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- ²⁵ Jason Steele, "10 Reasons Why Online Grocery Shopping is Failing," <http://www.investopedia.com>.

Important Notes

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