

White Paper

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The Fate of Real Estate in New Economy Retailing

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Key Takeaways:

- In the new economy, some retail real estate will face obsolescence risk, while the best assets will benefit from extremely high demand. Real estate assets that offer a destination or extreme convenience are best positioned to win in this environment.
- Ecommerce currently accounts for 15% of retail sales and we expect that level to almost double in the next 5-7 years. Ecommerce penetration will differ among consumption items based on their "ecommerce-ability," which we define and analyze in this paper.
- We estimate that approximately 44% of mall retail square footage (representing 30% of its value) will likely be shuttered or repurposed over the next 5-7 years.
- We believe we are at the beginning stages of the rationalization and repurposing of retail real estate, which, once complete, will lead to a new equilibrium between the amount of physical retail and new economy consumption.

In the new economy, the value of retail real estate will be defined by its ability to meet the needs of a retailer's omni-channel sales strategy. The implication for landlords is the need for significant repositioning of existing assets and lower demand for physical real estate. The consequence for investors is that while certain real estate will face obsolescence risk, the best assets will benefit from extremely high demand, especially as physical real estate availability rationalizes. Real estate assets that will win in the future of retail are either a destination or offer extreme convenience.

The penetration of ecommerce into traditional retail has grown exponentially in the last two decades. Originally a few percentage points in the early 1990s, concentrated in certain categories like electronics and books, ecommerce has grown to 15% of total retail sales today (excluding autos and gas), with general merchandise and apparel becoming increasingly penetrated by ecommerce in recent years. The upcoming years are likely to highlight the emergence of food as the next, albeit smaller, frontier within ecommerce led by the strategies of Walmart, Kroger, and Amazon/Whole Foods.

Peak Ecommerce vs. Physical Retail Market Share

In an attempt to define real estate's purpose in new economy retailing, we begin by estimating peak ecommerce levels as a percentage of retail spending. Looking at a number of factors including (1) current penetration levels of ecommerce, (2) growth trends in penetration and (3) the "ecommerce-ability" of the underlying consumption items, we expect ecommerce levels to peak in the next 5 to 7 years (approximately 2 full leasing cycles) at 28% of sales. This is almost double the figure today (15%), with penetration levels that are expected to be significant in electronics, material in apparel and merchandise, and lower in food and groceries.

		Current		Future	
Category	Total Retail Spend (%)	Ecommerce penetration	Physical retail share	Peak Ecommerce penetration	Equilibrium Physical Retail Share
Electronics	4%	60%	40%	70%	30%
Apparel	7%	35%	65%	50%	50%
Furniture	2%	18%	82%	25%	75%
Sporting Goods/Music	2%	17%	83%	25%	75%
General Merchandise	19%	40%	60%	50%	50%
Building Materials	12%	5%	95%	10%	90%
Health	9%	5%	95%	50%	50%
Groceries	21%	3%	97%	10%	90%
Food And Entertainment	20%	3%	97%	15%	85%
Other	4%	0%	100%	0%	100%
Total	100%	15%	85%	28%	72%

Peak Ecommerce vs. Physical Retail Market Share

Sources: U.S. Census Bureau, CenterSquare Investment Management, as of October 2017. Data is as a % of total retail spend - auto fuel and automobiles. Future data is predicted by CenterSquare based on an extrapolation of historical data. Actual results may differ substantially from projections presented.

Ecommerce-ability

То derive these projections, we assess ecommerce-ability the of goods and services along four categories: (1) the homogeneity of the product, (2) the type of information required to guide the purchase decision, (3) the cost of the product, (4) the time spent to purchase the product, and (5) the efficiency of last mile delivery. For example, a good that is highly



homogenous (explained by standardized factual information), low cost, and easy to buy online and have delivered has a higher ecommerce-ability ranking. Penetration will continue to be most aggressive in items such

Peak Ecommerce Penetration and Mall Retail Footprint					
Malls	Total Retail Spend (%)	Peak Ecommerce Penetration	Equilibrium Physical Retail Share		
Apparel & Merchandise	50%	50%	50%		
Electronics	10%	70%	30%		
Food	10%	5%	95%		
Other	30%	13%	87%		
Total	100%	36%	64%		

Mall Breakdown by Quality					
Mall Quality	Number of Malls	Sales/Sqft	Mall % by Retail Spend	Mall % by Value	Mall % by Sqft
А	1-200	\$635+	45%	65%	37%
В	201-600	\$385+	37%	28%	37%
С	601-1000	<\$385	18%	7%	26%
Total	1,000		100%	100%	100%

Current and Future Mall Sqft Needs

	Current Sqft		Future Sqft	
Mall Quality	Ecommerce Penetration	Current Physical Retail Share	Peak Ecommerce Penetration	Equilibrium Physical Retail Share
A	8%	92%	18%	82%
В	18%	82%	50%	50%
С	28%	72%	100%	0%
Total	15%	85%	44%	56%

purchase information characteristics, given brand awareness and technical specifications. Apparel and general merchandise should continue to see penetration levels increase. By providing a cheap and efficient means to return items, online retailers have solved the issues of higher heterogeneity of product and the lesser ability to acquire the more intuitive aspects of a purchase decision online. While we believe the product and purchase information characteristics of groceries to be more ecommerce-able than consensus. groceries are likely to have lower levels of peak ecommerce as the physical convenience aspect leans strongly toward bricks and mortar.

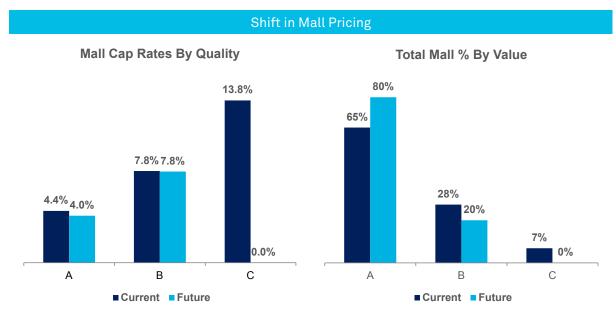
as electronics due to homogeneity and

The Impact on Mall Pricing

Mall retail is more vulnerable to the growth of ecommerce due to its large apparel exposure. Per our estimates,

Sources: Retail spend and mall data from Green Street Advisors, as of May 2017. Future sqft and peak values are projections based on estimates by CenterSquare Investment Management. Actual results may differ substantially from projections presented

36% of sales at malls are susceptible to moving online. However, this movement will not be consistent across assets. Convenience is defined by the consumer. High-quality malls providing a "destination" - somewhere shoppers want to spend time - will continue to drive traffic and demand from retailers. On the other hand, malls functioning simply as distribution points will find their purpose quickly replaced by the internet. As a consequence, over the next 5 to 7 years we estimate 44% of retail square footage will be shuttered or repurposed. This square footage represents a lesser percentage in terms of the value of all malls (30%) due to the concentration in lower-quality B and C assets.



Sources: Based on a universe of both public and private regional mall companies using data from Green Street Advisors as of May 2017. Quality classifications are based on analysis by CenterSquare Investment Management. Current cap rates as calculated by CenterSquare and future data is predicted by CenterSquare based on an extrapolation of historical data. Actual results may differ substantially from projections presented.

In turn, we forecast material cap rates changes for malls. Pricing is expected to be more akin to office assets, which exhibit a significant bifurcation between well-located assets with inelastic demand and lower-quality assets with higher capex. High-quality, core mall assets should be more valuable than ever in new economy retailing, attracting very low cap rates as they provide retailers with a valuable and increasing by unique format to interact face-to-face with customers. For example, one may look to Apple's strategy to see the high value placed on their physical presence; however, Apple only has about 270 stores with 150 in mall locations today.

Conclusion

We believe we are at the beginning stages of the rationalization and repurposing of physical retail, which, once complete, will lead to a new equilibrium between the amount of physical retail and new economy consumption. Only thereafter will there be an opportunity for assets to appreciate in value, particularly the higher-quality ones. As it stands today, we advise clients to be cautious when hunting for value in a sector likely to be dominated by creative destruction as these trends evolve.

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Mr. Scott Crowe is the Chief Investment Strategist at CenterSquare Investment Management and joined the firm in 2015. Scott is a member of CenterSquare's listed real estate, listed infrastructure and private real estate investment committees. In his capacity as Chief Investment Strategist, Scott works with each team's portfolio managers and investment professionals in the leadership of the investment process, with a particular focus on thought leadership by synthesizing our real asset views across the business. Scott is the portfolio manager of the Global Concentrated real estate securities strategy. Scott also works directly with CenterSquare's clients, providing education and

guidance on the market and helping them execute their investment goals. Prior to joining CenterSquare, Scott was CIO of Liquid Alternatives at Resource Real Estate where he built and led a global investment and distribution platform. Prior thereto, Scott was the lead Global Portfolio Manager for Cohen & Steers, where he was responsible for \$10B in assets under management and led the investment and research team of over 20 portfolio managers and analysts. Prior to this, Mr. Crowe held the position of Head of Global Real Estate for UBS Equities Research, where he built and managed the U.S. REIT division while leading a global team of more than 40 analysts. Scott began his career at Paladin Property Securities and holds an Honors Finance Degree from the University of Technology Sydney and a Bachelor of Commerce from the University of NSW / National University of Singapore.