

# KEI INVESTMENTS, LLC

## Market Update – “Disruptive Technology”

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March 23, 2014

It's 1901, the railroad system has just revolutionized the economy and travel across the U.S.. Let's say the year is 1901, what do you think the future would look like in 100 years? You would logically imagine an intricate and complex rail system, capable of picking you up right outside your home, taking you to wherever your destination may be, at lighting fast speeds. Is that what happened? Nope, not even close. Nobody would have imagined trains in the U.S. traveling SLOWER in 2001 than they did in 1901. Or that trains would still jump the tracks. Nobody would imagine trains would have little food and few sleeper cars. Of course it makes sense today because traveling by car or plane is much more convenient. But in 1901, none of those inventions were even considered in one's forecast of the future. Our minds tend to think linearly. We subconsciously linearly extrapolate current trends into the future, completely unaware of the inherent behavioral bias and how new technology may disrupt forecast for the future.

Today is no different with many new disruptive technologies changing the way we live, but sadly, we fail to recognize our behavior bias and adjust our thinking. By far, the leading disruptive technology today is the internet (thank you Al Gore). The internet has changed the way most people live and communicate. Who would have imagined in the 1950's when a good computer cost \$1 million and was the size of a house, that today computers would be a small fraction of the cost and size with far greater computing power. Who would have imagined in the 1980s that shopping would become available online and would eventually become a virtual experience. Such is our reality today. Granted, none of this is surprising to you, but how do you think the economy and business world has adapted?

Let's start with shopping, or retail sales. I hinted at this subject in my last Update. More and more, consumption is moving away from the brick and mortar in favor of online purchases. As the graphs below show, traditional brick and mortar retailing is falling (fast). Many of these surveys, however, are not capturing the surge in online retailing. We are not necessarily buying less stuff, we're just purchasing from other sources. Unfortunately, these surveys are based upon traditional brick and mortar and fail to pick up online sales correctly. The trend toward online sales has accelerated in the last few years to the surprise of many (economists, retailers, mall builders, shipping logistics companies). Did you notice how economists were way too optimistic about the recently completed holiday season; it is because they are not factoring the **new/recent** preference for online sales by consumers. The online shopping preference caught UPS flat-footed as a high volume of holiday packages overwhelmed the company, delaying the arrival of Christmas presents around the globe and sending angry consumers to social media to vent. Amazon.com responded with an email to affected customers offering shipping refunds and \$20 gift cards to compensate.

### ShopperTrak Retail Traffic Index (Lowest Since 2009)



## U.S. Retail Chain Store Sales YoY (Lowest Since 2009)



If consumers have changed their shopping habits, what are the economic/market implications. If consumers are not spending less, just changing where the dollars are spent, the economic impact direct from sales is nearly zero. However, it takes a few thousand online retail employees to do what tens of thousands of brick and mortar retail employees do. So, even if measured properly, the shift to online shopping is a drag on employment and GDP, which is likely one contributing factor toward continued slow economic growth, with consumption and GDP muddling along while the labor market continues to disappoint. As a case study, consider Best Buy relative to Amazon. Best Buy recognized the shift in consumer attitudes and began changing their brick and mortar locations to “showrooms” where customers can come and test out the products, with the hope that when they go home, they'll purchase from [www.bestbuy.com](http://www.bestbuy.com). As the chart bellows shows, sales have continued to disappoint and the stock has been punished for it. Why? Consumers find the product they like and search for the cheapest price. By continuing to operate brick and mortar stores, Best Buy costs are naturally higher than a 100% online company.

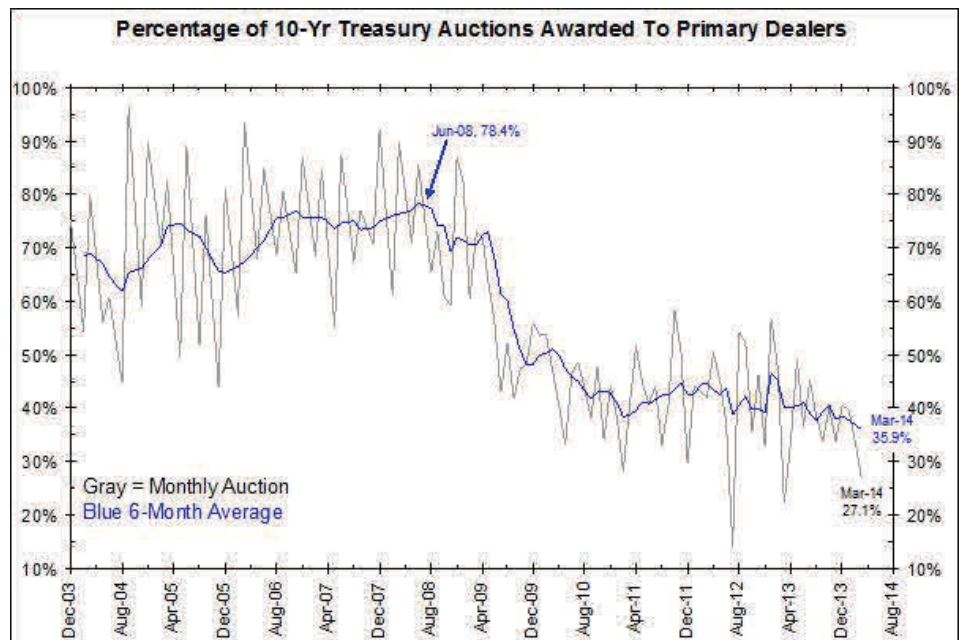
## Best Buy Stock Price



The internet and technology is changing not just traditional brick and mortar retail, it's also changing the way we travel. Taxis are the next in a long line of traditional businesses being completely disrupted by new technology. Leading the way in this disruption is Uber. No more standing in long lines for a dirty cab, with no heat or A/C. Uber has developed new technology using the smart phone that provides the customer with a completely different experience. Direct pickup, a clean car, and a secure credit card transaction. In researching this article, I discovered that it's not just Target with a data breach problem. According to First American Bank Chairman Tom Wells, avoid paying for your cab in Chicago with a credit card, stating "we have become aware of a data breach that occurs when a card is used in Chicago taxis."

How has the taxi industry responded to the new technology? Not well, and quite frankly, they're panicking. Rather than adopting the new technology and changing their business model, Yellow and Checker cabs have resorted to politics and attempts at blackmail threatening to "out" 5 alderman who are "secretly gay." Really. If that doesn't work, what's next, sending Uber drivers to the hospital and smashing windshields? Uber should be allowed to put Yellow and Checker out of business if the companies don't adapt. Then Uber will continue with their stated long-term goal of making car purchases obsolete, which is another area technology is disrupting traditional business models. Telsa has been selling directly to shoppers at two locations in New Jersey for about a year. However, state officials will now force Telsa to sell cars in the traditional way through a dealership. While I'm not in the market for a Telsa, I applaud their effort to not merely accept the traditional business model, but use the technology we have to make the car buying experience better.

Think disruptive technology is limited to consumer related products? Think again. Technology is changing the Treasury auction business. Traditionally, primary dealers have been awarded most of a Treasury auction. However, over the past several years, the primary dealers' market share continues to collapse (see chart below). In 2008 nearly 80% of the bidding in a 10-year auction went to the dealers. Today this percentage is under 36%, a new record low. The primary dealers are losing to online bidders in a similar way that Tesla's direct marketing of cars is disrupting car dealerships or Uber is disrupting the taxi industry. How long until the primary dealers demand protection for their business from the Fed just like car dealers and taxi drivers are demanding now?



What are we to do with these new technology? Just like brick and mortar retailers, the taxi industry, auto dealerships, and primary dealers, we must adapt with the new technology or face becoming obsolete. One way we can adapt is adjust our thinking about the current state of the world and where it may be going. With the current state of technology, there is no good reason why most of the economic statistics are from polling, models, or surveys. We can go directly to the source, in real time. As the link in the following article shows, if companies like Google can offer real-time inflation price data, why can't the BLS do the same? <http://www.ft.com/cms/s/2/deeb985e-d55f-11df-8e86-00144feabdc0.html#axzz2wnPuy0eX>