

September 15, 2016

**Dear clients and colleagues,**

With \$2.6T of a \$19T American GDP pie, the retail industry is an important part of the United States economy hence any downturn will materially impact growth numbers. More impactful than retailers had planned, the sharp shift towards on-line shopping has left companies in catch-up mode of re-shaping operations and forced to exit store locations, leaving several listed equities in the sector out of favor.

Consumers' message to retailers is, "I am ready to pay market price for a sight unseen item if it is efficiently delivered to my porch." What the consumer is also expressing is, "I know this is logistically more complex but you can keep the efficiency margins of carrying lower inventory and having less storefront."

Therefore, it is the responsibility of the retail industry to solve this new complexity. The industry has started doing this through an innovation sub-theme: mass customization or delivering efficiently high volumes at low prices, with each good and service potentially being different. To be successful, mass customization should not only involve robots and digital printers, but also show speed and agility in all company functions.

Gaining traction at an appealing pace is 3D printing, which is showing glimpses of attaining commercial mass product entry. A recent survey on the state of the industry from the firm Sculpteo indicates that users of 3D printing are expecting to increase their activities by 72% in 2017 where 90% now consider 3D printing as a strategic competitive advantage. Although 78% of usage is still in proof of concepts, prototypes, samples and art, 22% is now being used for production.

Following some discussions with industry specialists, the average tipping point to conventional mass production is 100 items, and once this threshold is met, conventional non-digital printing remains the most cost efficient method to produce. The main source of market resistance to digital or 3D printing is the high cost of printing materials of which prices still need to come down substantially for (adapted for digital) plastics, resins, metals, sandstone, ceramics, inks and waxes.

If we delve further into the retail industry, on-line sales penetration is strongest in apparel and foot-ware at 30% (compared to department stores at 10%), so the apparel and foot-ware markets hold real potential for mass customization and digital production. Noticing the trend early, Amazon is leading the way with key incentives for suppliers to go digital in textile printing. Personalized t-shirts, bedspreads and furniture are now shifting to mass customization.

At Global Alpha, we have been following 3D and digital printing from its onset and estimating when the development of large commercial markets will occur. For competitive reasons, companies are not forth coming in explaining their production methods and equipment, so we expect many post event disclosures to occur. One of our companies, Cimpres, has put forth mass customization as its mid-term plan. It is a leading player in small business corporate articles as well as professional marketing materials with one of its divisions, Vistaprint, being the largest provider of business cards in North America (17% of revenues). As you can imagine, surviving and competing in the world of business card printing, Vistaprint needs to be at the leading edge of mass customization in production as well as in design and operations.

We recently attended the Cimpres 2017 investor day in Boston. The company unveiled detailed mass customization plans across all divisions with goals to lower production costs and increase its level of service

quality. Usually held in New York, this year Cimpress hosted the event at their head office and saw record attendance with approximately 100 investors taking part.

By way of background, Cimpress once attempted to centralize the operations of 23 acquisitions but was unable to complete the task as each division held its own level of high complexity. Changing its mindset, now the head office only performs corporate and accounting activities. Its mass customization plan consists of two main efforts: move to digital printing and develop internal operations software. Cimpress believes that mass customization is achievable if each division develops its own operational software under a common platform, which in turn becomes compatible and usable by other divisions. Thus the software development process is in a state of constant evolution, made to measure for each division and allowing for seamless cross over activity.

Cimpress (CMPR - \$94.46)

<https://cimpress.com/>

CMPR is a technology and manufacturing company based in Boston, Massachusetts. Cimpress is a global leader in mass customization and “Web-to-print”. The company has a local presence in 19 countries with 17M customers per year and caters to micro businesses, families, SMBs, graphic designers & resellers. They have 50+ localized websites across multiple brands (Vistaprint, Araprint, Pixartprinting, etc).

CMPR operates in a \$30B micro business marketing spend industry across Europe and North America.

CMPR is its sole competitor for mass customization of computer integrated manufacturing (CIM), large scale in small quantities, empowering people to make an impression.

Have a good weekend.

The Global Alpha Team