



TM Capital Print & Packaging Industry Spotlight



# **Glossary of Terms**

**Corrugated Packaging**: Made of corrugated pleated material with three different layers of paper – an inside liner, outside liner, and rippled sheet which runs in between. Most common applications are shipping boxes and retail displays.

Die-Cutting: Printing technique of using a thin, razor-sharp steel blade to cut substrates into various shapes.

**Digital Printing**: Method of printing that does not require a printing plate but prints directly onto a surface by processing artwork through a computer.

Embossing: Printing technique of creating a raised pattern on a surface.

**Flexible Packaging**: Lightweight packaging whose shape can be readily changed, such as bags, pouches, and plastic films.

**Flexographic Printing**: Method of printing that uses a flexible relief plate wrapped around rotating cylinders to transfer an image onto a surface. Uses a wider range of water-based inks, can print on a wider variety of materials, and has faster production times than offset printing.

**Nanography**: The usage of nano-sized (ultra-small) pigments in digital printing – combines the performance of offset printing with the versatility of digital printing.

**Offset Printing**: Method of printing that uses a printing plate to transfer an image onto a rubber blanket and then onto a surface, using oil or water-based inks. The traditional form of printing – excels in providing high-quality images and is currently the lowest cost method of long-run production.

**Printing Plate**: A sheet of thin and flexible metal or polyester; transfers an image to paper or other surface. A plate is prepared for each color used.

**Rigid Packaging**: Packaging which cannot be easily molded; can be made of plastic, metal, wood, glass, or paperboard.

**Smart Packaging**: Packaging systems that have function beyond containment of the product – can provide information on product quality, help extend shelf life, measure the inner atmosphere of the package or the shipping environment.

Substrate: Base material onto which images will be printed.



#### Introduction

Technological advancements mark the "Fourth Industrial Revolution", a disruptive period that integrates physical and digital communication. Recent breakthroughs have improved organizational efficiency through digitization of processes in industries such as Print and Packaging. As interaction between organizations and their customers becomes increasingly personalized, printing technologies - traditionally geared for mass, undifferentiated runs - are evolving to meet these needs. An increasingly computerized society and consequent changes in cultural and commercial practices motivate growth in the sector.

The popularization of digital printing has implications for flexible, corrugated, and folding carton packaging and labels. The method does not require a printing plate, but rather processes artwork through a computer and prints directly onto the product surface. Digital printing is time-efficient and more cost-effective in short-medium runs than traditional offset printing, giving manufacturers the ability to customize products without stopping or slowing down the printing process. The versatility of this method enables companies to expand their packaging offerings and utilize more nuanced marketing strategies through micro-targeting and just-in-time customization. While remaining a partner to traditional techniques, the optimization of digital printing in combination with tools such as 3D printing and nanography will motivate an industry-wide adoption of this method.





Source: Xeikon, Xeikon Café North America 2018

Digital print comprises 16.2%<sup>1</sup> of global print market value. It is the fastest growing area of commercial printing, with revenues expected to increase 2.8% per annum through 2021 while total commercial printing revenues fall 0.1% per annum during the same period.<sup>2</sup> Digital is uniquely positioned to become the dominant mode of printing; improvements in technology will enhance its efficiency and scalability for longer printing runs. Digital printing infrastructure is at the forefront of the industry's capital investments over the past three years color digital will account for 52% of new press installations in 2018, compared to only 26% in 2013.3

Flexographic printing revenue will also grow due to the method's color and quality advantages over offset printing.

Flexographic presses are most prominently used for label and wrapper printing - a fast-growing segment of packaging - because they can accommodate laminating and die cutting processes in a variety of shapes and sizes. Similar to digital printing, the process is cost efficient, effective with short runs, and compatible with many substrates. The increased use of digital and flexographic presses has allowed finishing equipment to gain traction as companies demand more attractive packaging designs and quicker turnarounds for traditionally time-consuming techniques such as die-cutting and embossing. Once considered novel, these techniques are now routinely used as value-add to high quality packaging materials.

Companies such as HP have been at the forefront of digital innovation since its acquisition of the Indigo technology in 2001. The subsequent development of HP's liquid electrophotography proprietary technology has improved digital print quality and media versatility, increasing the range of compatible substrates. HP along with its counterparts provides customizable marketing solutions possible only with digital print - the "Share-a-Coke" Coca-Cola campaign, as well as over 200,000 unique Bud Light can designs.



<sup>&</sup>lt;sup>1</sup> Smithers Pira, The Future of Digital vs. Offset Printing to 2022

 <sup>&</sup>lt;sup>2</sup> Freedonia, Commercial Printing Report 2017
<sup>3</sup> PRIMIR Study, Tag and Label Printing Trends

## Changing Consumer Tastes Propel Growth and Innovation in the Flexible and Corrugated Packaging Industries

The increasing adoption of omni-channel retail platforms drives demand for flexible and corrugated packaging and creates opportunities for digital printing in both the brick-and-mortar and e-commerce space. The North American market for digital printing across the packaging sector has an expected CAGR of 30% through 2021 and will exhibit double-digit growth rates in every printed packaging sector. Corrugated and flexible packaging are particularly attractive with expected CAGR of 60% and 57% through 2021, respectively.



U.S. consumer spending is projected to grow 2.6%<sup>4</sup> in 2018, with manufacturers' shipments and food service revenues expected to expand 3.1% and 4.1% per annum through 2020, respectively.<sup>5</sup> The popularity of e-commerce has shaped the role of packaging - U.S. e-commerce sales grew 15% in 2017 and have an expected CAGR of 9.5% through 2025.6 Product packaging defines the "unboxing experience", as home delivery is often a customer's first exposure to the product. Customers who are impressed with a product's packaging are more likely to make repeat purchases, recommend the brand to others, and share images of the product on social media.7 As brick and mortar makes up a smaller portion of sales, companies look for new ways to reach consumers "in the aisle" with eyecatching, custom packaging. The global corrugated packaging market will benefit most strongly from these tailwinds, with a projected CAGR of 5.8%<sup>8</sup> through 2026 while the global packaging industry grows

Source: Keypoint Intelligence, Color Digital Print for Packaging: The State of the Industry

3.8%<sup>9</sup> as a whole. Products are shipped in simple corrugated packaging, usually involving minimal color and labeling. However, fine graphics printing on corrugated board is becoming increasingly common for retail-ready packaging (RRP), point of sale displays, and merchandising units due to refined digital printing capabilities. The ability to customize aesthetically-pleasing packaging has expanded the desire for RRP that is shelf-ready upon delivery – no unpacking required by retailers.

The increase in e-commerce volume and related logistical constraints have forced companies to develop "smart" packaging products, a sector projected to expand at a CAGR of 8.0%<sup>10</sup> through 2021 globally. The space consists of active packaging which provides functionality such as moisture control, intelligent packaging which incorporates features such as temperature-sensitivity and color-changing logos that communicate product changes, and packaging with scanning capabilities to connect users with mobile applications related to the product. Innovation is particularly significant in the food and beverage sector amid calls for longer shelf lives of packaged products and reduction in the use of preservatives in food packages and labels. Many "smart" packages and labels are printed digitally, suggesting that digital printing has enabled innovation to meet modern packaging demands.<sup>11</sup>



<sup>4</sup> www.conference-board.org

<sup>&</sup>lt;sup>5</sup> Freedonia, Commercial Printing Report 2017

<sup>6</sup> IBISWorld

<sup>&</sup>lt;sup>7</sup> Shorr Packaging Corp, 2016 E-Commerce Packaging Preferences Survey

<sup>&</sup>lt;sup>8</sup> Persistence Market Research, Global Market Study on Corrugated Packaging

<sup>&</sup>lt;sup>9</sup> Smithers Pira, The Future of Packaging Design: Long-Term Strategic Forecasts to 2026

<sup>&</sup>lt;sup>10</sup> Smithers Pira, The Future of Smart Packaging to 2021

<sup>&</sup>lt;sup>11</sup> Mordor Intelligence, Smart Packaging Market Report

# **Other Considerations**

Although the roll out of exciting printing technologies currently in "beta" stages, underscored by changing consumer habits and the proliferation of e-commerce, will continue to drive the Print and Packaging sector, additional considerations could impact these markets.

#### Technological Hindrances

Manufacturers of digital printers must overcome hurdles related to product quality and cost efficiency to drive largescale implementation of their products. Although digital printers generally require lower set up costs, as run lengths increase they become less cost effective than offset printers. Additionally, ancillary technologies such as finishing are still adapting to the new method. Ink and finishing options trail those available to legacy printers and digitally printed inks are more susceptible to cracks in color and fading over time. It is likely that refinement of manufacturing technologies will address these shortcomings, but adoption may lag due to the learning curve associated with operating the machinery effectively.

#### Increasing Regulatory Demands

Suppliers of packaging must ensure their products meet stringent regulations. Labeling in particular is subject to regulatory requirements at the federal, state, and local level, specifically for end markets such as food, pharmaceutical goods, and cosmetics. Operators involved in packaging these products must register with the FDA and comply with safety regulations. Packaging has also been the target of several environmental laws intended to reduce solid waste and emissions, as commonly used materials such as plastic wrappers, aluminum cans, polyethylene, and PET bottles are difficult to recycle and dispose of after the contents of the package are consumed. The industry will continue to face pressure from environmental activism mandating the use of recycled fibers and limiting plastic consumption.

#### Growing Sustainability Concerns

Demand has shifted away from rigid to flexible packaging in part due to changes in consumer tastes – urbanization and growing awareness concerning environmental sustainability have encouraged companies to pursue lightweight, easily transportable alternatives to traditional packaging. An environmentally-driven distaste for plastic has propelled growth in paper packaging, corrugated boxes, and folding cartons. Compared to its rigid counterparts, corrugated packaging is cost-effective, lightweight but still pressure-resistant, and eco-friendly, as many corrugated boards are made of recycled paper. This change has particularly affected the food and beverage sectors with products traditionally packaged in rigid plastic containers now packaged in paper folding cartons or corrugated materials. Calls for sustainability have also forced printers to develop primer coatings to enhance substrate quality on recycled fibers and inks that do not contain harmful chemicals.

# M&A Overview

Both the Commercial Print and Packaging industries remain fragmented despite consolidation efforts – in 2016, the 400 largest commercial printers represented less than half of total industry revenues.<sup>12</sup> The sector is composed both of large, integrated manufacturers, many of which operate vertically in one materials group, and regional multimaterial suppliers which serve as intermediaries between manufacturers and consumer packaged goods clients. Entry is prolific – the number of digital printer manufacturers increased from 3 to 30 from 2005 to 2017.<sup>13</sup> There are 4,700 printed packaging convertors and several thousand producers of flexible, corrugated, and folding carton packaging and labels across North America. Though the smallest sector in terms of market value, labels is the most fragmented space with an estimated 2,350 companies in North America. M&A activity in the flexible packaging industry nonetheless remains high due to the sector's strong year-on-year growth rates and robust EBITDA margins of flexible packaging converters.<sup>14</sup>

The segmentation and maturity of the industry belies its true growth potential – these characteristics force firms to expand via acquisition. The lack of dominant players in the space has motivated a high volume of both strategic and sponsor led M&A since the Great Recession of 2009. Strategic activity is strong as printers seek to diversify their product offering and enter adjacent markets by acquiring packaging companies. A "buy vs. build" dilemma has arisen, as many companies believe it is more expedient to expand through acquisition rather than internal development.



<sup>&</sup>lt;sup>12</sup> Freedonia, Commercial Printing Report 2017

<sup>&</sup>lt;sup>13</sup> Keypoint Intelligence, Color Digital Print for Packaging: The State of the Industry

<sup>&</sup>lt;sup>14</sup> Xeikon, Xeikon Café North America, 2018

# Strategic Buyers Seek to Acquire Service Capabilities

The desire of large companies to reposition themselves as a one-stop-shop for printing and packaging needs has driven healthy acquisition activity. For example, **TC Transcontinental**, Canada's largest printer and a provider of packaging, advertising, and publishing services, has acquired three packaging services companies since 2017 – Coveris Americas, Multifilm Packaging Corporation, and Les Industries Flexipack – to expand its end-to-end flexible packaging solutions. **Flint Group**, one of the world's largest manufacturers and distributors of printing equipment, has a storied history of inorganic growth. Originally formed through a merger of four packaging and print media companies, it has maintained a strong appetite for acquisition, integrating three companies in the past two years.

Attractive Industry-Wide Characteristics Motivate Financial Sponsor Investments



# While strategic M&A has dominated the space, financial sponsors have demonstrated sustained interest in the sector during the last 5 years – making up 15.1% of deals in 2017 and 14.5% YTD.<sup>15</sup> Add-on acquisitions comprised 45.6% of sponsor deal volume in 2017, with sponsors often appending packaging or marketing companies to existing investments in printing companies.<sup>16</sup> In January 2018, **Leonard Green & Partners** acquired Pro Mach Group, a U.S. packaging company, from **AEA Investors** for \$2.2 billion. Leonard Green had previously acquired Charter NEX Films, a manufacturer of specialty films for the food and medical industries, in 2017. In recent years, companies offering packaging items, particularly in the food, beverage, household goods, and pharmaceutical industries, rather than printing services or equipment have been the most attractive targets. This is primarily due to several attractive industry-wide characteristics: provision to diverse end markets, low cyclicality relative to other industrial sectors,

#### **Digital Innovation Inspires VC Funding**

minimal capital investment requirements, and stable cash flows.<sup>17</sup>

Venture capital investors in the industry have targeted post-digital technologies in the start-up space. In June 2018, **Landa Digital Printing** completed a \$300M equity financing led by two German investment firms – SKion GmbH and ALTANA AG – generating a valuation of \$1.8 billion on modest sales. Benny Landa, developer of the Indigo technology and "father of digital printing", has developed a nanographic printing process that allows for high-speed digital printing on all substrates in short-medium lengths, elimination of the drying process, unprecedented color range and quality, and no harmful emissions. Landa asserts that his method is more cost-effective, more abrasion and scratch resistant, and consumes less energy than both digital and traditional offset printing. Landa Digital Printing has formed strategic partnerships with printers such as Manroland AG, Komori, and Heidelberg to accelerate the adoption of digital and nanographic printing methods.<sup>18</sup>

The increasing influence of virtual data collection on advertising will provide opportunities for future partnerships. As tags and labels become increasingly "smart", products can be made Cloud-compatible, vastly expanding the uses of functional packaging. For example, **Avery Dennison**, a leading manufacturer and distributor of labels and related products, has developed its "Janela solution", a technology that enables the digitization and mobile integration of labels on products such as apparel. The platform, already utilized in Nike and Adidas running shoes, creates unique



<sup>15</sup> Capital IQ

<sup>&</sup>lt;sup>16</sup> PMCF Packaging Pulse 2017

<sup>&</sup>lt;sup>17</sup> William Blair Packaging Report 2017

<sup>&</sup>lt;sup>18</sup> www.landanano.com

web identities for items and allows customers to verify product authenticity, connect with applications, and view exclusive branded content through their mobile devices. Avery Dennison expects to digitize a minimum of 10 billion apparel and footwear products in the next several years, revolutionizing personal, instantaneous interactions between consumers and branded products.<sup>19</sup> Though the uptake and development of such software is nascent, it demonstrates the increasing significance of packaging as a digital marketing tool.



<sup>&</sup>lt;sup>19</sup> Avery Dennison









**5 Year Stock Performance** 







Selected Public Companies – Flexible Packaging														
(\$ in millions)														
	Enterprise	Revenue			EBITDA			Enterprise Value / EBITDA			Revenue Growth		EBITDA Margins	
Company	Value	LTM	2017	2018E	LTM	2017	2018E	LTM	2017	2018E	5 yr. CAGR	2018E	LTM	2018E
Amcor Limited	\$17,093	\$9,136	\$9,498	\$9,447	\$1,436	\$1,457	\$1,501	11.9x	11.7x	11.4x	0.7%	0.8%	15.7%	15.3%
Bemis Company, Inc.	5,621	4,099	4,018	4,081	572	550	573	9.8	10.2	9.8	(5.5%)	0.3%	13.9%	13.7%
Intertape Polymer Group Inc.	1,094	928	905	1,031	118	127	142	9.2	8.6	7.7	2.8%	11.8%	12.8%	14.0%
Mondi plc	15,125	8,268	8,404	8,928	1,622	1,674	1,870	9.3	9.0	8.1	4.7%	8.3%	19.6%	19.9%
Sealed Air Corporation	10,142	4,560	4,421	4,747	775	829	903	13.1	12.2	11.2	(4.2%)	5.0%	17.0%	18.8%
Median	\$10,142	\$4,560	\$4,421	\$4,747	\$775	\$829	\$903	9.8x	10.2x	9.8x	0.7%	5.0%	15.7%	15.3%
Mean	9,815	5,398	5,449	5,647	904	927	998	10.7	10.4	9.6	(0.3%)	5.2%	15.8%	16.3%

Selected Public Companies – Rigid Packaging														
(\$ in millions)														
	Enterprise		Revenue			EBITDA		Enterpris	se Value /	EBITDA	Revenue	Growth	EBITDA	Margins
Company	Value	LTM	2017	2018E	LTM	2017	2018E	LTM	2017	2018E	5 yr. CAGR	2018E	LTM	2018E
AptarGroup, Inc.	\$6,956	\$2,664	\$2,420	\$2,735	\$517	\$469	\$536	13.5x	14.8x	13.0x	0.7%	3.8%	19.4%	19.4%
Berry Global Group, Inc.	12,130	7,530	7,125	7,838	1,333	1,331	1,435	9.1	9.1	8.5	9.3%	9.8%	17.7%	18.7%
RPC Group Plc	5,786	4,916	3,519	4,834	749	552	781	7.7	10.5	7.4	26.8%	63.3%	15.2%	15.7%
Silgan Holdings Inc.	5,795	4,334	4,066	4,396	641	555	616	9.0	10.4	9.4	3.0%	12.5%	14.8%	13.6%
Sonoco Products Company	6,778	5,294	5,009	5,409	724	661	750	9.4	10.3	9.0	2.2%	4.7%	13.7%	13.2%
Median	\$6,778	\$4,916	\$4,066	\$4,834	\$724	\$555	\$750	9.1x	10.4x	9.0x	3.0%	9.8%	15.2%	15.7%

Selected Public Companies – Paper Packaging														
in millions)														
	Enterprise		Revenue			EBITDA		Enterpris	se Value /	EBITDA	Revenue	Growth	EBITDA	Margins
Company	Value	LTM	2017	2018E	LTM	2017	2018E	LTM	2017	2018E	5 yr. CAGR	2018E	LTM	2018E
Cascades Inc.	\$2,221	\$3,379	\$3,307	\$3,510	\$304	\$306	\$382	7.3x	7.3x	5.8x	3.6%	7.9%	9.0%	9.3%
DS Smith Plc	11,213	7,578	6,181	7,571	900	788	942	12.5	14.2	11.9	21.7%	15.7%	11.9%	12.7%
Graphic Packaging Holding Company	8,118	5,233	4,406	6,086	813	715	1,013	10.0	11.4	8.0	0.9%	2.5%	15.5%	16.2%
International Paper Company	31,977	22,682	23,201	23,401	3,591	3,897	4,350	8.9	8.2	7.4	(2.3%)	19.0%	15.8%	16.8%
Packaging Corporation of America	12,630	6,783	6,375	7,018	1,400	1,324	1,485	9.0	9.5	8.5	19.5%	10.3%	20.6%	20.8%
Smurfit Kappa Group plc	13,007	9,977	9,960	10,423	1,378	1,437	1,670	9.4	9.0	7.8	3.0%	4.8%	13.8%	14.4%
WestRock Company	20,725	15,667	14,986	16,375	2,541	2,361	2,909	8.2	8.8	7.1	22.6%	5.7%	16.2%	15.8%
Median	\$12,630	\$7,578	\$6,375	\$7,571	\$1,378	\$1,324	\$1,485	9.0x	9.0x	7.8x	3.6%	7.9%	15.5%	15.8%
Mean	14,270	10,186	9,774	10,626	1,561	1,547	1,821	9.3	9.8	8.1	9.9%	9.4%	14.7%	15.1%

			Se	lected Publi	c Compan	ies – Prin	ting Servi	ces						
(\$ in millions)														
	Enterprise	Revenue			EBITDA			Enterprise Value / EBITDA			Revenue Growth		EBITDA Margins	
Company	Value	LTM	2017	2018E	LTM	2017	2018E	LTM	2017	2018E	5 yr. CAGR	2018E	LTM	2018E
Dai Nippon Printing Co., Ltd.	\$6,427	\$12,721	\$12,724	\$12,836	\$989	\$910	\$928	6.5x	7.1x	6.9x	(2.3%)	(3.0%)	7.8%	7.2%
Quad/Graphics, Inc.	2,093	4,100	4,104	4,054	406	465	423	5.2	4.5	4.9	(1.0%)	(5.2%)	9.9%	11.3%
R.R. Donnelley & Sons Company	2,349	6,989	6,867	6,931	428	473	456	5.5	5.0	5.2	(8.3%)	0.5%	6.1%	6.9%
Toppan Printing Co., Ltd.	5,914	13,086	13,178	13,187	1,013	1,034	1,056	5.8	5.7	5.6	(1.2%)	(0.8%)	7.7%	7.8%
Transcontinental Inc.	2,100	1,563	1,543	1,921	375	307	360	5.6	6.9	5.8	0.3%	(0.2%)	24.0%	19.9%
Median	\$2,349	\$6,989	\$6,867	\$6,931	\$428	\$473	\$456	5.6x	5.7x	5.6x	(1.2%)	(0.8%)	7.8%	7.8%
Mean	3,777	7,692	7,683	7,786	642	638	645	5.7	5.8	5.7	(2.5%)	(1.7%)	11.1%	10.6%

Source: Capital IQ. As of July 30, 2018



Founded in 1989, TM Capital is the client-first investment banking team advising industry leading companies across North America and around the world. In everything we do, our professionals share a relentless commitment to engineering extraordinary outcomes with an unmatched standard of client care. Over the last three decades, we have completed more than 300 transactions with a combined value in excess of \$20 billion. With offices in Atlanta, Boston and New York, our mission critical capabilities include: complex mergers and acquisitions; debt and equity financings; minority and majority recapitalizations; restructurings; and board advisory services. TM Capital is also a founding member firm of Oaklins, the world's most experienced mid-market M&A advisor with 700 M&A professionals in 60 offices operating in the major financial centers around the world. For more information, please visit www.tmcapital.com.

