



Industry Update
Chemicals
Q3 2020

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Financial Performance

Size Profile, LTM Financials, Forward Estimates

(USD in millions, except per share data)

Company Name	Ticker	Size Profile			LTM Operating Data		Forward Estimates		
		Price at 09/30/20	% of 52 Week High	TEV	Total Assets	LTM Revenue	LTM EBITDA	2020 Est. Revenue	2020 Est. EBITDA
Specialty Chemicals									
The Sherwin-Williams Company	SHW	\$696.74	96.0%	\$68,502	\$20,810	\$17,987	\$3,323	\$18,193	\$3,461
DuPont de Nemours, Inc.	DD	\$55.48	75.5%	\$66,598	\$72,141	\$20,349	\$4,981	\$20,139	\$4,937
Ecolab Inc.	ECL	\$199.84	86.4%	\$65,845	\$18,097	\$14,313	\$3,037	\$12,016	\$2,425
PPG Industries, Inc.	PPG	\$122.08	90.9%	\$38,007	\$18,300	\$13,749	\$2,146	\$13,648	\$2,356
Celanese Corporation	CE	\$107.45	83.4%	\$19,146	\$9,769	\$5,496	\$1,025	\$5,409	\$1,404
Commodity Chemicals									
Dow Inc.	DOW	\$47.05	83.6%	\$54,086	\$59,945	\$38,040	\$5,592	\$37,604	\$5,298
LyondellBasell Industries N.V.	LYB	\$70.49	71.3%	\$39,057	\$31,949	\$27,995	\$3,472	\$26,634	\$3,566
Westlake Chemical Corporation	WLK	\$63.22	83.6%	\$12,895	\$13,694	\$7,422	\$1,104	\$7,426	\$1,198
Diversified Chemicals									
Eastman Chemical Company	EMN	\$78.12	90.5%	\$18,223	\$16,009	\$8,492	\$1,614	\$8,372	\$1,735
The Chemours Company	CC	\$20.91	92.6%	\$7,088	\$6,948	\$4,984	\$251	\$4,861	\$852
Huntsman Corporation	HUN	\$22.21	89.2%	\$6,936	\$8,097	\$6,007	\$437	\$5,963	\$585
Industrial Gases									
Linde plc	LIN	\$238.13	91.4%	\$149,750	\$87,209	\$27,051	\$8,418	\$27,000	\$8,686
Air Products and Chemicals, Inc.	APD	\$297.86	95.9%	\$60,201	\$25,169	\$8,856	\$3,389	\$8,946	\$3,672
Fertilizers & Agricultural Chemicals									
Nutrien Ltd.	NTR	\$39.23	76.8%	\$36,280	\$45,271	\$19,424	\$3,234	\$19,735	\$3,611
Corteva, Inc.	CTVA	\$28.81	89.8%	\$27,392	\$41,690	\$13,993	\$2,254	\$13,973	\$1,981
FMC Corporation	FMC	\$105.91	93.1%	\$17,223	\$9,772	\$4,687	\$1,280	\$4,747	\$1,306

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Valuation Metrics

Return Profile, Trading Multiples

Company Name	Ticker	Return Profile					Trading Multiples		
		Return on Assets	Return on Equity	Revenue Growth	EBITDA Margin	EBITDA Growth	5-yr Beta	TEV / LTM Revenue	TEV / LTM EBITDA
Specialty Chemicals									
The Sherwin-Williams Company	SHW	8.2%	45.5%	0.8%	18.5%	23.5%	1.1x	3.8x	20.6x
DuPont de Nemours, Inc.	DD	1.9%	-7.4%	-6.5%	24.5%	-22.5%	1.3x	3.3x	13.4x
Ecolab Inc.	ECL	6.5%	16.5%	9.4%	21.2%	3.4%	0.9x	4.6x	21.7x
PPG Industries, Inc.	PPG	5.6%	20.3%	-9.1%	15.6%	-7.5%	1.1x	2.8x	17.7x
Celanese Corporation	CE	4.5%	19.7%	-16.1%	18.6%	-25.3%	1.2x	3.5x	18.7x
	Mean	5.3%	18.9%	-4.3%	19.7%	-5.7%	1.1x	3.6x	18.4x
	Median	5.6%	19.7%	-6.5%	18.6%	-7.5%	1.1x	3.5x	18.7x
Commodity Chemicals									
Dow Inc.	DOW	2.8%	-14.7%	-14.9%	14.7%	-18.8%	0.0x	1.4x	9.7x
LyondellBasell Industries N.V.	LYB	4.3%	15.2%	-21.0%	12.4%	-36.5%	1.5x	1.4x	11.2x
Westlake Chemical Corporation	WLK	1.8%	5.2%	-9.8%	14.9%	-24.5%	1.5x	1.7x	11.7x
	Mean	3.0%	1.9%	-15.2%	14.0%	-26.6%	1.0x	1.5x	10.9x
	Median	2.8%	5.2%	-14.9%	14.7%	-24.5%	1.5x	1.4x	11.2x
Diversified Chemicals									
Eastman Chemical Company	EMN	4.0%	7.9%	-10.1%	19.0%	-15.8%	1.5x	2.1x	11.3x
The Chemours Company	CC	-0.2%	-14.8%	-11.6%	5.0%	-73.1%	2.4x	1.4x	28.2x
Huntsman Corporation	HUN	1.3%	6.3%	-13.7%	7.3%	-44.2%	1.7x	1.2x	15.9x
	Mean	1.7%	-0.2%	-11.8%	10.4%	-44.4%	1.9x	1.6x	18.5x
	Median	1.3%	6.3%	-11.6%	7.3%	-44.2%	1.7x	1.4x	15.9x

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Valuation Metrics

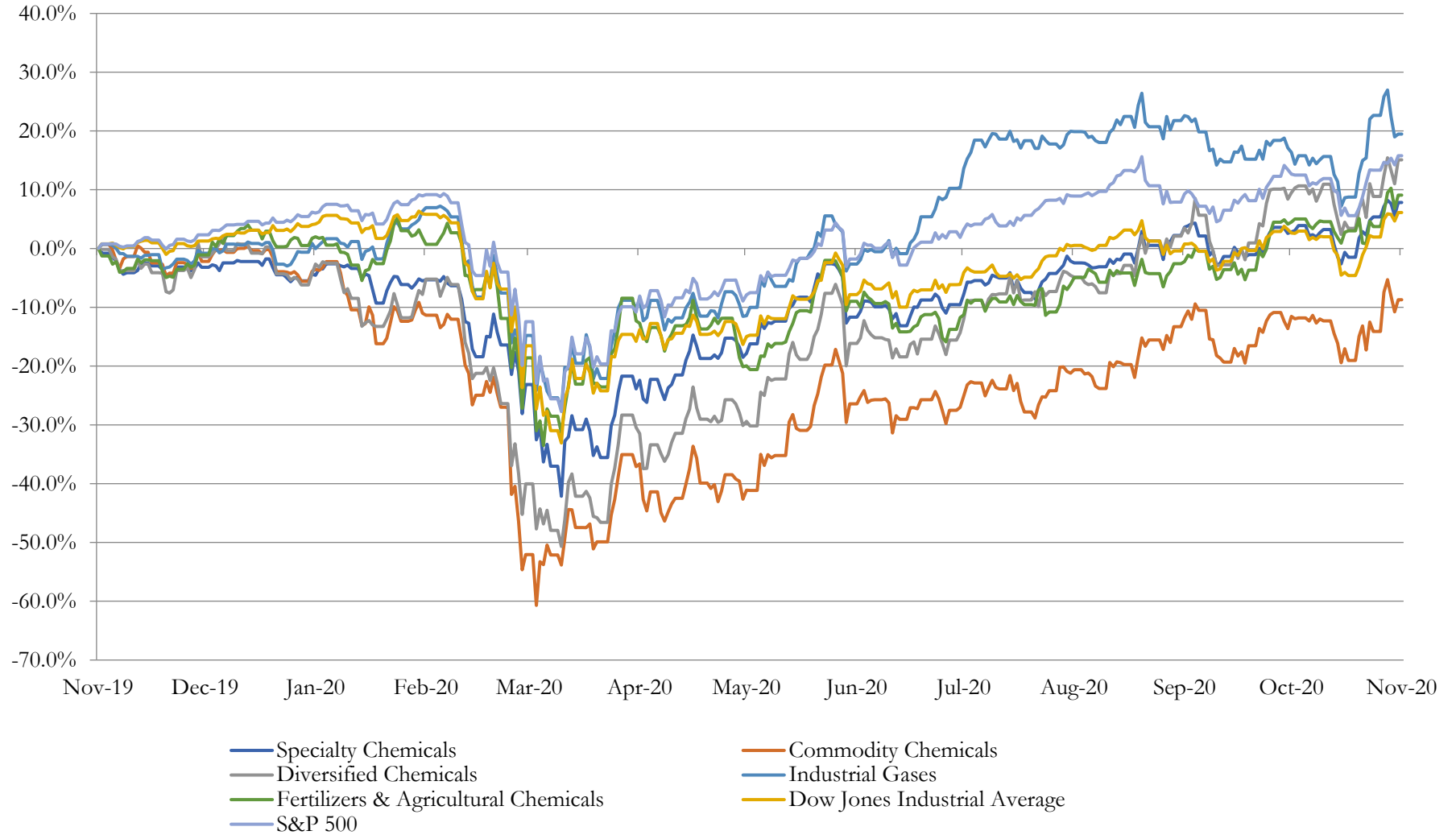
Return Profile, Trading Multiples

Company Name	Ticker	Return Profile						Trading Multiples	
		Return on Assets	Return on Equity	Revenue Growth	EBITDA Margin	EBITDA Growth	5-yr Beta	TEV / LTM Revenue	TEV / LTM EBITDA
Industrial Gases									
Linde plc	LIN	2.8%	4.7%	0.4%	31.1%	14.0%	0.8x	5.5x	17.8x
Air Products and Chemicals, Inc.	APD	6.2%	16.3%	-0.7%	38.3%	4.3%	0.9x	6.8x	17.8x
	Mean	4.5%	10.5%	-0.2%	34.7%	9.1%	0.8x	6.2x	17.8x
	Median	4.5%	10.5%	-0.2%	34.7%	9.1%	0.8x	6.2x	17.8x
Fertilizers & Agricultural Chemicals									
Nutrien Ltd.	NTR	2.1%	0.4%	-1.3%	16.6%	-21.9%	0.0x	1.9x	11.2x
Corteva, Inc.	CTVA	1.6%	2.5%	2.3%	16.1%	17.9%	0.0x	2.0x	12.2x
FMC Corporation	FMC	7.2%	20.2%	3.9%	27.3%	10.7%	1.0x	3.7x	13.5x
	Mean	3.6%	6.5%	10.8%	11.1%	18.2%	0.3x	2.5x	12.3x
	Median	2.1%	2.6%	10.0%	16.4%	5.4%	0.0x	2.0x	12.2x

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LTM Equity Performance

Major Indexes



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Recent M&A Activity

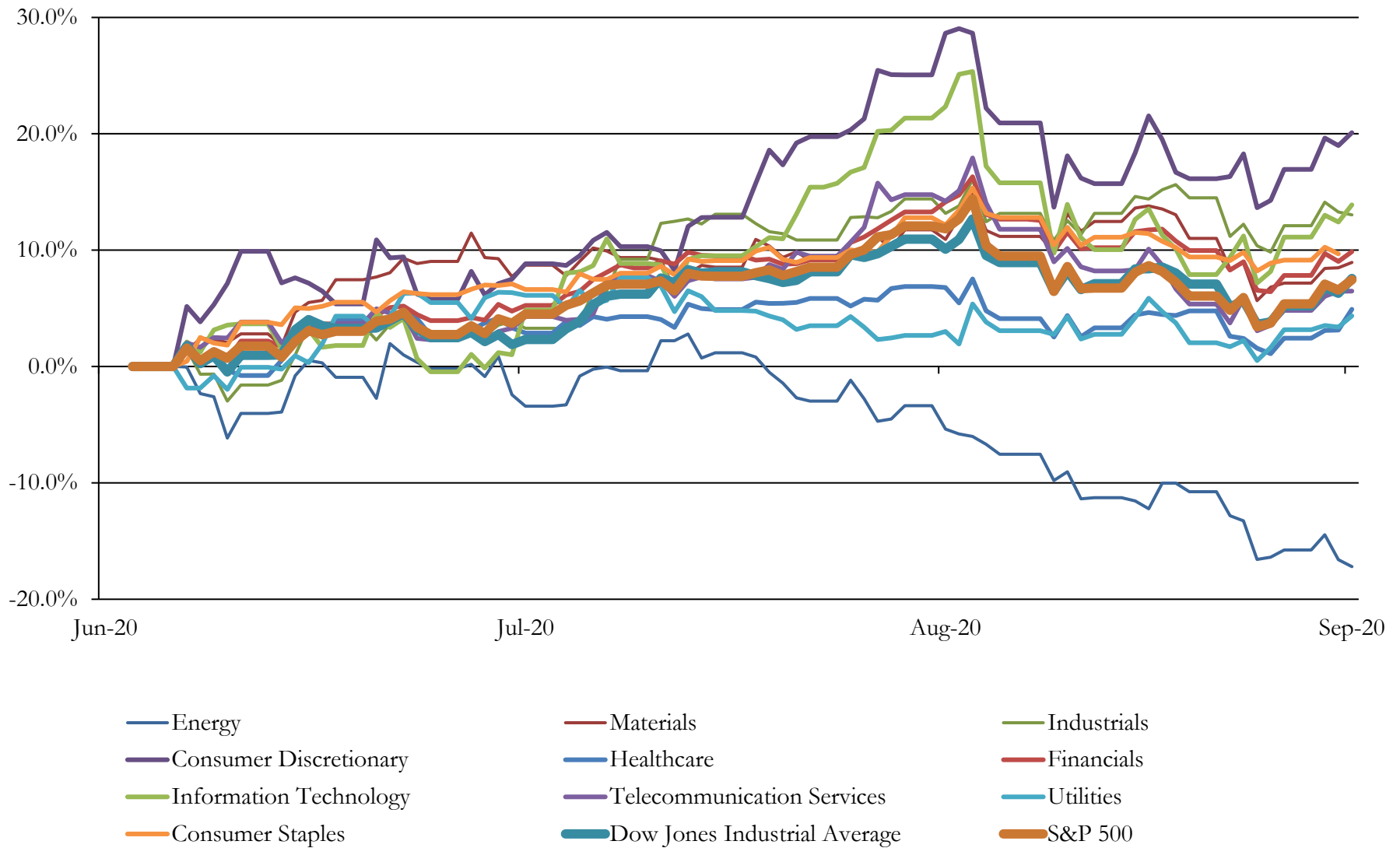
Year-to-Date 2020

Acquirer(s)	Target	Effective Date	Target Data ^{1,2}					
			LTM ³ Sales	LTM EBITDA	%	TEV ⁴	TEV / Sales	TEV / EBITDA
Saudia Basic Industries Corporation	Clariant AG (catalysts, chemicals and additives for personal care products, plastics and coatings, oil and gas production/mining)	9/2/2020	\$4,595.8	\$569.4	12.4%	\$9,401.4	2.0x	16.5x
Showa Denko K.K.	Hitachi Chemical Company, Ltd. (advanced materials for semiconductors and liquid crystal displays)	4/20/20	\$5,968.2	\$717.3	12.0%	\$8,994.3	1.5x	12.5x
Apergy Corporation	Champion X Holding Inc. (chemicals and services for oil and gas production)	6/3/20	\$2,369.5	\$388.2	16.4%	\$3,887.8	1.6x	10.0x
Firmenich Productions Participations	Les Derives Resiniques Et Terpeniques SA. (pine resin derivatives for adhesives and coatings and terpenes for fragrances, cosmetics and food supplements)	5/28/20	\$595.6	\$107.8	18.1%	\$1,858.9	3.1x	17.2x
Glenwood Private Equity	SKCKOLONPI, Inc. (polyimide films and varnishes)	3/6/20	\$177.9	\$45.8	25.7%	\$1,008.8	5.7x	22.0x
Iris Parent LLC	Innophos Holdings, Inc. (phosphate sales and acids used in foods, beverages, water and metal treatment and detergents)	2/7/20	\$758.5	\$119.5	15.8%	\$1,003.5	1.3x	8.4x
Synthomer USA LLC	OMNOVA Solutions Inc. (emulsion polymers, specialty chemicals and decorative and building products)	4/1/20	\$759.4	\$70.9	9.3%	\$751.8	1.0x	10.6x
Sumitomo Chemical Do Brasil	Nufarm Limited's South American Subsidiaries (crop protection and seed treatment business)	4/1/20	\$749.9	\$83.0	11.1%	\$647.6	0.9x	7.8x
Phatisa Fund Managers LLLC	Rolfes Holdings Limited (organic and inorganic color pigments; beneficiated silica; synthetic resins and specialty chemicals)	2/13/20	\$101.5	\$6.1	6.0%	\$42.9	0.4x	7.0x
MEAN							2.0x	12.5x
MEDIAN							1.5x	10.6x

¹Source: S&P Capital IQ³LTM: Last Twelve Months²All figures listed in \$USD (millions)⁴TEV: Total Enterprise Value

5 Change in Market Capitalization by Sector

Last Three (3) Months as of September 30, 2020

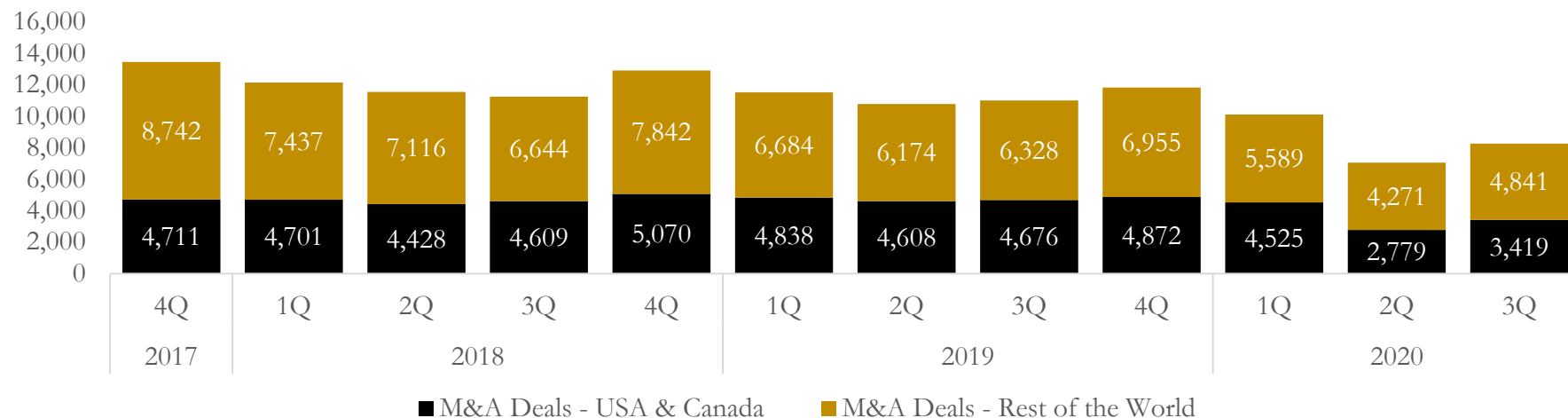


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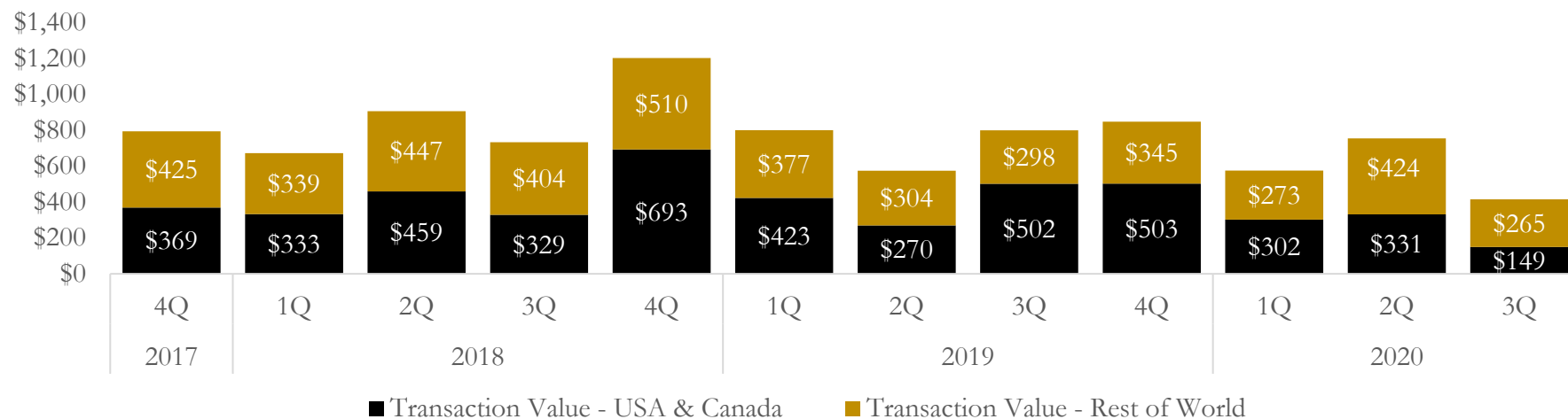
M&A Deal Flow Statistics

Last Three (3) Years as of September 30, 2020

M&A Deal Count - Number of Transactions



M&A Deal Count - Total Transaction Value (\$B)



About Houlihan Capital

Houlihan Capital is a leading, solutions-driven valuation, financial advisory and boutique investment banking firm. We pride ourselves on being thought leaders in an ever-changing landscape.

Houlihan Capital is SOC-compliant, a FINRA and SIPC member and committed to the highest levels of professional ethics and standards.

Valuation & Financial Advisory

We provide an array of services that include enterprise valuations, portfolio valuation, valuation of carried interest, transaction opinions, tax and financial reporting compliance, purchase price allocations, and a wide variety of consulting services through our Financial Advisory Group.

Investment Banking

Through our Investment Banking Group, we offer sell side/buy side advisory and capital raises. Through our Special Situations desk, we provide services that fit outside the archetypal verticals, including liquidity solutions, transactional advisory, and secondary market advisory and trading.

Litigation Support

Our team provides support for a wide variety of situations including commercial and shareholder disputes, derivatives and structured finance litigation, and fraudulent conveyance.

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