

# IMO 2020

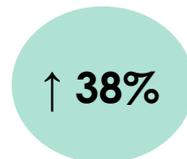
## THEMATIC PLAYBOOK | MarketDesk Investment Strategy

---



## IMO 2020: Global Shipping Industry Switching to Cleaner Fuels

### THE QUICK NUMBERS



Estimated drop in high Sulphur fuel oil demand in 2020; Down from 3.4m barrels/day to 2.1m barrels/day



Estimated spread per metric ton between HSFO and VLSFO in 2020, up from \$175-200/mt in 2019



Estimated % of total ship fuel capacity running on scrubbers as a result of IMO 2020

### WHAT'S HAPPENING?

The International Maritime Organization (IMO) is a specialized United Nations agency responsible for regulating marine shipping. The IMO's mission is to develop a common framework for shipping, including establishing safety practices, addressing environmental concerns, and overseeing maritime security and shipping efficiency. One of IMO's current goals is to address the impact shipping has on international climate change. In an effort to control shipping's greenhouse gas emissions, IMO is working to implement a new fuel standard known as "IMO 2020". This new standard reduces the amount of Sulphur content permitted in marine fuels from 3.5% to 0.5%. IMO 2020 goes into effect on January 1, 2020.

### THE MARKET OPPORTUNITY & INVESTMENT CASE

The shipping industry is responsible for 90% of world trade. It is the most common method for shipping items, such as apparel, iron ore, crude oil, and agricultural commodities. The industry's use of high Sulphur fuel oil (HSFO) makes it a large contributor to pollution, with the industry ranking between Germany and Japan as the sixth largest greenhouse gas producer globally.

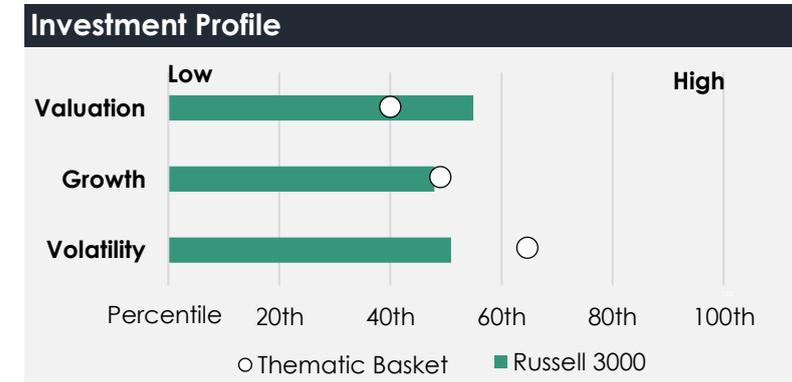
The IMO is combatting shipping's pollution problem by requiring shippers to use oil with less Sulphur content. To be in compliance with new IMO regulations, shippers can either: (1) burn compliant fuel known as very low Sulphur fuel oil (VLSFO) or (2) install scrubbers to clean their marine fuel emissions. Installing scrubbers permits a ship to continue burning non-compliant fuel. Shippers' changing fuel consumption will have a significant impact on trade and fuel prices globally. Below are three significant changes.

1. Shippers are split over the strategy of installing scrubbers, because the payoff potential of scrubber installation is heavily dependent on the HSFO-VLSFO spread. **A wide spread would give shipowners installing scrubbers a significant fuel cost advantage over ships without scrubbers.** Scrubber ships, whether they are cargo, dry bulk, or product tankers, could then pass through lower fuel surcharges and gain market share.
2. Given that HSFO has minimal other end uses, refiners will need to either sell HSFO at a lower price or refine it further to produce compliant fuel. **Complex refineries can benefit from IMO 2020 by purchasing HSFO at a discount, refining HSFO to produce VLSFO, and selling VLSFO at a premium to capture the HSFO-VLSFO spread.**
3. Complex refineries, which are primarily located on the US Gulf Coast, will be dependent on refined product tankers to transport HSFO to US refineries from global locations. **This means refined product tankers hauling HSFO to complex US refineries and VLSFO back to areas with non-complex refineries could see increased voyages and strong charter rates.** A secondary effect is the potential for increasing product tanker book values as rates normalize after industry lows in 2016-2018.

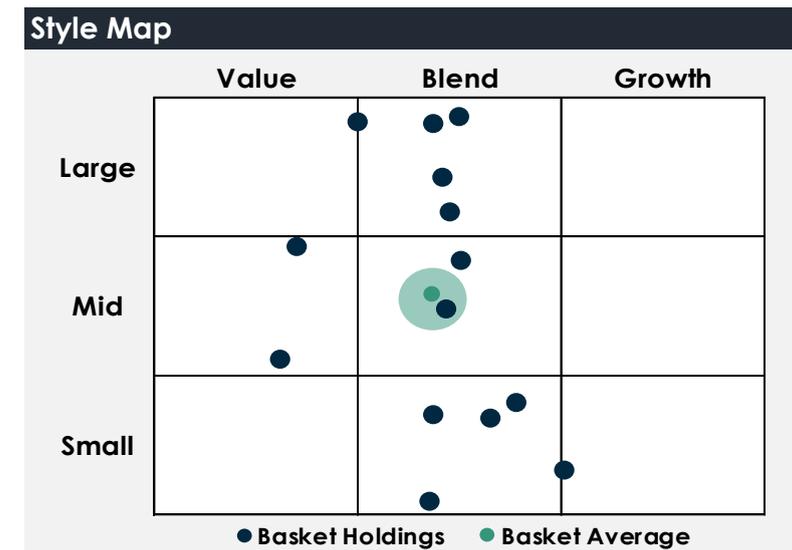
### WHAT'S NEXT?

IMO 2020 will cause significant disruption to the marine shipping industry as shippers transition to compliant fuels and refiners react to the changing HSFO-VLSFO spread. The ultimate question: How wide will the spread between HSFO and VLSFO become? That will depend on how many ships install scrubbers; how many older, less fuel efficient ships are scrapped; and the number of refiners able and willing to produce VLSFO. Depending on how IMO 2020 evolves, increased shipping rates could cause port-to-port moves of everyday goods (e.g. TVs, apparel, etc.) to be more expensive and lead to inflation in the coming years.

Key Statistics	
Sector	Industrials & Energy
Sub-Industries	Tankers & Barges, Refiners, Manufacturers
Holdings	14
Average Market Cap (\$B)	\$9,794
NTM Price / Earnings	10.6x
Price / Book	1.8x
EV / EBITDA	11.4x
Price / Cash Flow	24.6x
Dividend Yield %	1.84%



Price Returns	Basket	Russell 3000
3 Month	↑ 12.6%	↑ 3.2%
6 Month	↑ 16.9%	↑ 7.6%
1 Year	↓ -4.1%	↑ 2.1%





## IMO 2020: Global Shipping Industry Switching to Cleaner Fuels

### CATALYSTS ↗

- Increased compliant fuel consumption; More refining & product tanker shipping
- New shipping routes as refiners & traders profit from compliant fuel imbalances
- Supply/Demand balance of refined product tankers improves

**IMO 2020 will increase consumption of compliant fuels and decrease consumption of heavy oils.** More consumption of refined products will impact current supply-demand dynamics and could put pressure on the middle distillates segment, which includes heating kerosene, jet fuel, and diesel. This could have a positive impact on refiners (more refining & higher spreads = additional revenue opportunities) and product tankers (more refining = more product tanker shipping demand).

**A new global network built on IMO compliant fuels will offer complex refiners (ability to refine HSFO to VLSFO) and traders new profit and arbitrage opportunities.** Refiners with complex equipment, such as US Gulf Coast refiners that historically refined heavy Canadian and Venezuelan crude, will benefit from a wide HSFO-VLSFO spread as they buy cheap HSFO and sell expensive VLSFO. Traders will profit from arbitrage opportunities due to compliant fuel supply-demand imbalances globally (e.g. too much VLSFO in one port and not enough in another port). Both refiners and traders will be reliant on product tankers. For example, US refiners could purchase HSFO from non-complex EU refineries, ship it on product tankers to the US, refine it to produce VLSFO, and use product tankers to ship VLSFO back to the EU. Traders could purchase VLSFO at an oversupplied port, like Singapore, and use product tankers to ship it to South African ports where it can be sold for a higher price. These and other new refined product trade routes could increase demand for product tanker voyages and increase charter rates.

**Product tanker deliveries surged between 2014-2016, depressing voyage rates as new vessels hit the market.** More recently, the product tanker orderbook and number of deliveries have both slowed. Voyage rates have stabilized as a result. IMO 2020 will have two additional impacts on product tanker supply: (1) older, less fuel efficient ships could be scrapped as owners determine fuel costs are too high if VLSFO becomes expensive and (2) owners could temporarily remove ships from the global fleet as scrubbers are installed. Both would decrease the supply of vessels and could pressure voyage rates upward. From the demand side, more refining and arbitrage opportunities (see paragraph above) could increase the number of voyages.

### KEY RISKS ↘

- Economic slowdown lowers global oil & bulk shipping demand
- Tight HSFO-VLSFO spread
- High debt levels at shipping companies caused by years of shipping cycle lows

**An economic slowdown caused by general economic weakness or prolonged trade negotiations would limit IMO 2020's impact.** Global oil and refined product demand are both tied to a strong economy. When the economy is growing, more oil and refined products are used by airlines, marine shippers, trucking, and personal vehicles. Oil demand slows as the economy slows and businesses/people pull back on travel and manufacturing. In a scenario where the economy slows, upward price pressure on middle distillates won't be as high. This would in turn keep the HSFO-VLSFO spread tight, limiting the positive monetary impact of shippers installing scrubbers and US refiners earning high HSFO-VLSFO spreads.

**A tight HSFO-VLSFO spread will have a drastically different impact than a wide spread.** Wide spreads will benefit eco-design marine ships (more fuel efficient = lower fuel bills) and ships with scrubbers installed. Tight spreads will limit the benefit to eco-design and scrubber ships. Wide spreads will allow complex refiners to buy HSFO cheap and sell VLSFO at a premium. Narrow spreads will decrease refiner profit potential. Wide spreads will lead refiners to blend VLSFO over jet fuel, causing airline fuel bills to increase materially. Narrow spreads will keep the jet fuel gas spread tight and airline fuel bills lower.

**The product tanker industry is highly cyclical.** Marine shipping companies are notorious for overbuilding ships and creating large supply-demand imbalances between demand for refined product shipments and supply of product tankers. This happened in 2016-2018 as excess supply of product tankers flooded the market after a strong 2014-2015. Companies used debt to overbuild ships. The tanker oversupply resulted in voyage rates below breakeven levels, which hurt companies with high debt loads. The marine shipping industry cut costs, improved operating efficiencies, and restructured debt out of necessity. If IMO 2020 doesn't bring supply-demand back into balance and/or voyage rates stay depressed, companies will struggle to make interest payments and could declare bankruptcy.



IMO 2020 Basket

FIGURE 1: 1-Year Performance vs Russell 3000

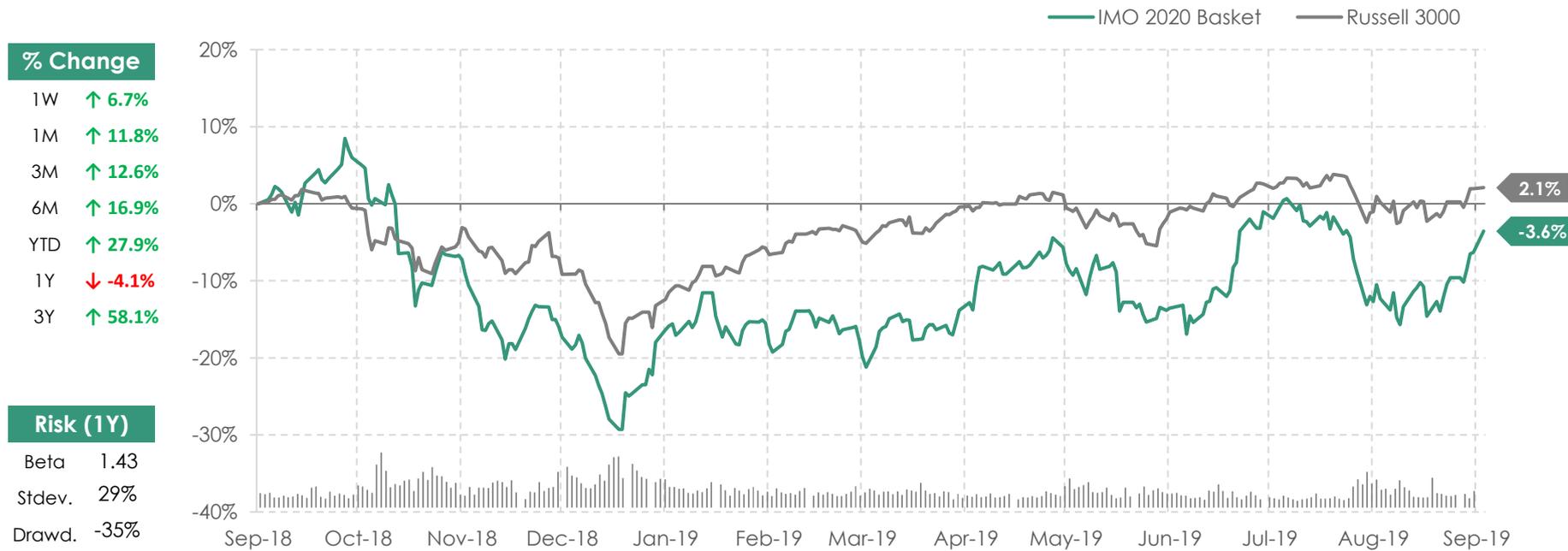


FIGURE 2: Market Breadth & Fundamentals

		Current	1Y Avg
200dma Spread	↑	10.4%	-1.2%
14d RSI	↑	58	50
% Advancing	↑	93	51
% Declining	↓	7	49
NTM P/E Ratio	↓	10.6x	19.1x
NTM Net Margin	↑	6.8%	4.5%
NTM Div Yield	-	1.84%	1.84%
NTM EPS	↑	\$43.53	\$41.26

FIGURE 3: Attribution by Sub-Industry (1-Year)

	Top (% chg   bps)	Bottom (% chg   bps)
Tankers/Barge	47% +1584	Bulk Shippers -5% -79
Fuel Logistics	51% +272	U.S. Refiners -32% -1191
Manufacturer	6% +68	

FIGURE 4: Relative Strength & Index % above 100dma

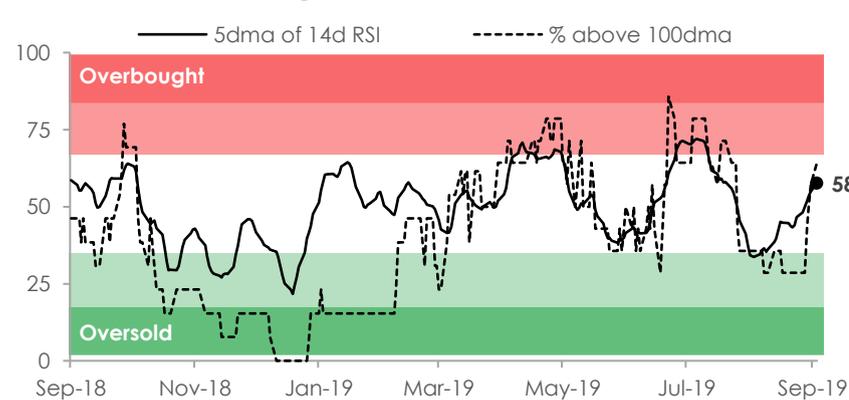


FIGURE 5: 10-day Net Advance / Decline Line

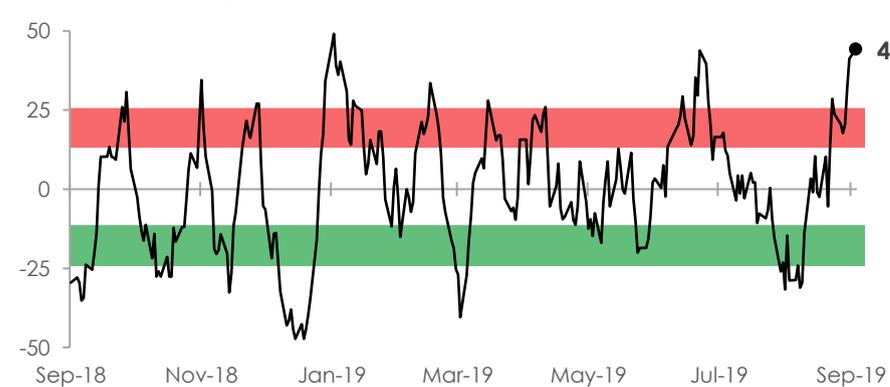


FIGURE 6: Attribution by Stock (1-Year)

	Top (% chg   bps)	Bottom (% chg   bps)
DSSI	173% +1258	ASC -3% -20
STNG	66% +344	PSX -11% -70
INT	51% +272	SBLK -7% -70
LIQT	6% +68	VLO -31% -221
KEX	2% +16	MPC -35% -259
SALT	-1% -9	HFC -29% -265
INSW	-2% -14	PBF -52% -376

FIGURE 7: Direction of Next Year's EPS Revisions

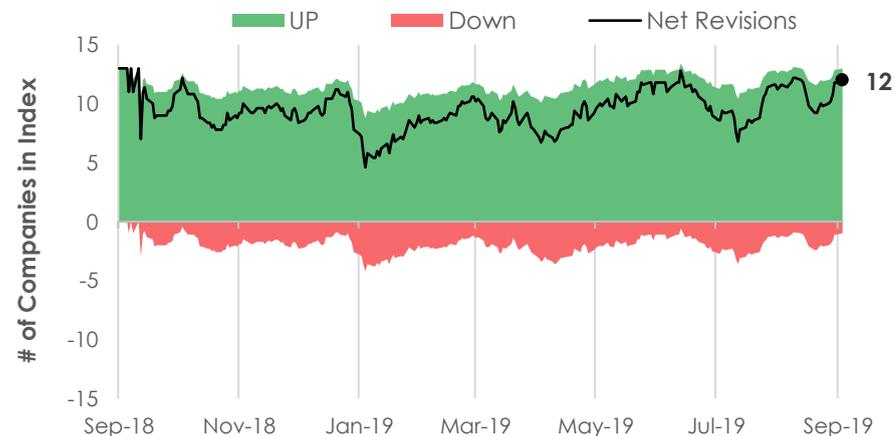
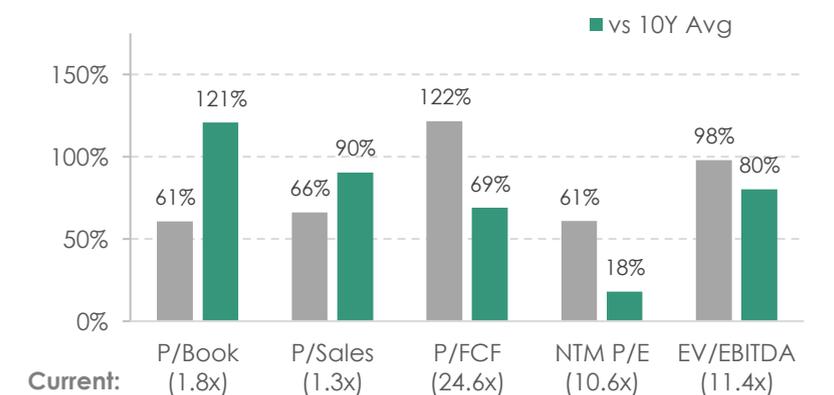


FIGURE 8: Growth Statistics (YoY)

Item	10Y History	3Y Avg	2019e	1M % Chg
Sales		12.2%	21.2%	↓ -2%
EBITDA		22.4%	21.9%	↓ -3%
EBIT		-14.6%	44.3%	↓ -3%
Net Income		-11.1%	-53.0%	↓ -2%
EPS		-9.4%	-39.1%	↓ -5%
Dividends		9.9%	12.0%	↑ 8%
BVPS		-3.0%	1.9%	-
FCF		54.6%	-109.5%	↑ 24%

FIGURE 9: Relative Valuations



The information herein was obtained from sources which EventShares Research LLC (ESR) believes to be reliable, but we do not guarantee its accuracy. Neither the information, nor any opinions expressed, constitute a solicitation of the purchase or sale of any securities or related instruments. ESR is not responsible for any losses incurred from any use of this information.



Figure 10  
Basket Holdings by Sub-Industry

Ticker	Company	Sector	Market Cap (\$M)	Avg Daily Vol (3M)	Wall Street Rating	Wall Street Price Target	Profitability (EBITDA Margin)	Leverage (Debt / EBITDA)	Valuation (NTM P/E)	Cash Flow Yield	52W Range	Performance			
												1W	6M	1Y	
<b>Product Tankers &amp; Barges</b>															
Moving Refined Fuels															
ASC	Ardmore Shipping Corp.	Energy	227	238,149	Buy	\$9.80	13.9%	16.2x	9.6x	-7.7%		12%	31%	1%	
DSSI	Diamond S Shipping, Inc.	Energy	458	193,690	Buy	\$17.70	20.5%	8.7x	4.1x	-		5%	-	-	
INSW	International Seaways, Inc.	Energy	553	158,900	Buy	\$27.40	14.4%	20.8x	4.1x	-33.1%		9%	13%	-1%	
KEX	Kirby Corporation	Industrials	4,832	470,724	Overweight	\$87.80	17.1%	2.8x	21.9x	1.0%		12%	13%	4%	
STNG	Scorpio Tankers Inc.	Energy	1,584	574,757	Buy	\$38.50	32.1%	15.5x	10.9x	0.8%		16%	80%	65%	
<b>Bulk Shippers Installing Scrubbers</b>															
Potential Fuel Cost Advantage if HSFO/VLSFO Spreads Widen															
SALT	Scorpio Bulkers, Inc.	Industrials	478	395,189	Buy	\$8.70	41.2%	8.3x	16.6x	12.1%		5%	76%	-4%	
SBLK	Star Bulk Carriers Corp.	Industrials	1,043	590,329	Buy	\$12.70	38.7%	5.7x	4.9x	-24.4%		5%	69%	-10%	
<b>Complex U.S. Refiners</b>															
Ability to Purchase HSFO at Discount, Refine to VLSFO, & Earn Spread															
HFC	HollyFrontier Corporation	Energy	8,420	2,026,620	Hold	\$55.20	11.6%	1.2x	9.8x	13.8%		13%	5%	-28%	
MPC	Marathon Petroleum Corp	Energy	35,865	6,095,758	Buy	\$76.60	8.1%	3.5x	8.4x	8.3%		10%	-5%	-34%	
PBF	PBF Energy, Inc. Class A	Energy	3,050	2,133,870	Overweight	\$35.50	3.2%	2.2x	6.6x	13.3%		9%	-12%	-50%	
PSX	Phillips 66	Energy	46,229	2,557,815	Overweight	\$118.00	5.8%	1.7x	10.6x	12.1%		4%	9%	-10%	
VLO	Valero Energy Corporation	Energy	33,848	3,105,729	Buy	\$99.70	5.8%	1.4x	9.6x	6.5%		10%	2%	-29%	
<b>Manufacturer of Scrubber Systems</b>															
More Scrubber Installations = Higher Potential Revenue															
LIQT	LiqTech International, Inc.	Industrials	152	201,767	Buy	\$11.80	-30.0%	0.0x	15.8x	-4.7%		12%	-11%	16%	
<b>Outsourced Fuel Logistics</b>															
New Fuel Networks Increase Complexity of Sourcing Fuel & Increase Demand for Fuel Agent Services															
INT	World Fuel Services Corporati	Energy	2,645	514,307	Overweight	\$43.00	0.8%	2.3x	14.9x	-19.6%		9%	43%	48%	



### Definitions

**Daily Moving Average (dma):** A daily moving average is an simple moving average calculated by adding the closing price of the security for a number of time periods, and then dividing this total by the same number of periods. **Overbought / Oversold (OB/OS):** OB is short for Overbought. OS is short for Oversold. Overbought (Oversold) = +1 Standard Deviation Above (Below) 50dma. **Relative Strength (14d RSI):** The relative strength index (RSI) is a technical indicator used in the analysis of financial markets. The RSI is most typically used on a 14-day timeframe, measured on a scale from 0 to 100, with high and low levels marked at 70 and 30, respectively. **EPS:** Earnings per share is the portion of a company's profit that is allocated to each outstanding share of common stock, serving as an indicator of the company's financial health. **P/E Ratio:** The price-to-earnings ratio is the ratio for valuing a company that measures its current share price relative to its EPS. **52W High / Low:** A 52-week high/low is the highest and lowest price at which a stock has traded during the previous year. **Street Rating:** The average stock rating across Wall Street in which analysts rate a stock as a Buy or Overweight when they have a positive outlook for a company and a Sell or Underweight rating when they have a negative outlook for a company. **Basis Point (bp):** A unit of measure used in finance to describe the percentage change in the value or rate of a financial instrument. One basis point is equivalent to 0.01% (1/100th of a percent).

### Disclaimer

**IMPORTANT NOTICES AND DISCLAIMERS.** MarketDesk is wholly-owned by EventShares Research, LLC ("EventShares Research" or "ESR"). The information and opinions expressed herein are solely those of ESR, are provided for informational purposes only and are not intended as recommendations to buy or sell a security, nor as an offer to buy or sell a security. Recipients of the information provided herein should consult with a financial advisor before purchasing or selling a security. ESR is not an investment advisor and is not registered with the U.S. Securities and Exchange Commission or the Financial Industry Regulatory Authority, and, further, the owners, employees, agents or representatives of ESR are not acting as investment advisors and might not be registered with the U.S. Securities and Exchange Commission. The information and opinions provided herein are provided as general market commentary only, and do not consider the specific investment objectives, financial situation or particular needs of any one client. The comments may not be relied upon as recommendations, investment advice or an indication of trading intent. ESR is not soliciting any action based on this document. Investors should consult with their own financial adviser before making any investment decisions. There is no guarantee that any future event discussed herein will come to pass. The information herein was obtained from various sources, which we believe to be reliable, but we do not guarantee its accuracy or completeness. Past performance does not guarantee or indicate future results. Investing involves risk, including the possible loss of principal and fluctuation of value. ESR disclaims responsibility for updating information. In addition, ESR disclaims responsibility for third-party content, including information accessed through hyperlinks.

ESR is not a registered investment adviser. No mention of a particular security, index, derivative or other instrument in The Report constitutes a recommendation to buy, sell, or hold that or any other security, nor does it constitute an opinion on the suitability of any security, index, or derivative. The Report is strictly an information publication and has been prepared without regard to the particular investments and circumstances of the recipient. SUBSCRIBERS SHOULD VERIFY ALL CLAIMS AND COMPLETE THEIR OWN RESEARCH AND CONSULT A REGISTERED FINANCIAL PROFESSIONAL BEFORE INVESTING IN ANY INVESTMENTS MENTIONED IN THE PUBLICATION. INVESTING IN SECURITIES AND DERIVATIVES IS SPECULATIVE AND CARRIES A HIGH DEGREE OF RISK, AND SUBSCRIBERS MAY LOSE MONEY TRADING AND INVESTING IN SUCH INVESTMENTS.

Principals of ESR may or may not hold or be short any of the securities, options, or futures discussed in the Report, or any other securities, at any time.

## MarketDesk Research

### Daily Newsletter

The Opening Quote

- U.S. Edition (8:30am EST)

### Weekly Reports

The Weekly Note

Idea Screens

- Stocks Edition

- ETF Edition (coming soon)

### Monthly Reports

Thematic Playbooks

Mid-Month Check-In

Earnings Season Monitor (coming soon)

Industry Snapshots (coming soon)

### Contact Us

#### Email

[Subscribe@MarketDeskResearch.com](mailto:Subscribe@MarketDeskResearch.com)

#### Headquarters

260 Newport Center Drive, Suite 100  
Newport Beach, CA 92660  
United States