

Spiderrock EXS, LLC - Held NMS Stocks and Options Order Routing Public Report

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2nd Quarter, 2021

April 2021

S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non- Directed Orders	Non-Marketable Limit Orders as % of Non- Directed Orders	Other Orders as % of Non-Directed Orders
0.36	0.00	89.30	10.70	0.00

Venues

Venue - Non-directed Order Flow	Non- Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non- Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non- Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non- Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
CBOE EDGX OPTIONS EXCHANGE (EDGX)	7.36	0.00	8.37	2.64	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE ARCA (ARCX)	20.39	0.00	19.00	26.90	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NASDAQ - ALL MARKETS (XNAS)	23.53	0.00	22.90	26.48	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE BATS OPTIONS EXCHANGE (BATS)	9.42	0.00	9.42	9.44	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NEW YORK STOCK EXCHANGE, INC. (XNYS)	9.26	0.00	11.19	0.26	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE EDGA OPTIONS EXCHANGE (EDGA)	5.12	0.00	6.19	0.14	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE BATY OPTIONS EXCHANGE (BATY)	2.74	0.00	3.26	0.27	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE MKT LLC (XASE)	11.24	0.00	9.29	20.40	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NASDAQ OMX BX (XBOS)	0.47	0.00	0.58	0.01	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
INVESTORS EXCHANGE	5.42	0.00	6.54	0.17	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
(IEXG)													

Material Aspects:

CBOE EDGX OPTIONS EXCHANGE (EDGX):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NYSE ARCA (ARCX):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NASDAQ - ALL MARKETS (XNAS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE BATS OPTIONS EXCHANGE (BATS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NEW YORK STOCK EXCHANGE, INC. (XNYS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE EDGA OPTIONS EXCHANGE (EDGA):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE BATY OPTIONS EXCHANGE (BATY):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NYSE MKT LLC (XASE):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NASDAQ OMX BX (XBOS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

INVESTORS EXCHANGE (IEXG):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

April 2021

Non-S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
0.91	0.01	89.30	10.70	0.00

Venues

Venue - Non-directed Order Flow	Non- Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non- Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non- Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non- Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
NYSE ARCA (ARCX)	24.28	0.00	23.22	26.91	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE BATY OPTIONS EXCHANGE (BATY)	1.41	0.00	2.08	0.08	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE EDGX OPTIONS EXCHANGE (EDGX)	11.12	0.00	11.84	9.89	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NEW YORK STOCK EXCHANGE, INC. (XNYS)	5.63	0.00	8.29	0.38	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NASDAQ - ALL MARKETS (XNAS)	26.27	0.00	24.49	30.42	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE EDGA OPTIONS EXCHANGE (EDGA)	2.18	0.00	3.27	0.03	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE MKT LLC (XASE)	12.10	0.00	10.44	15.70	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE BATS OPTIONS EXCHANGE (BATS)	12.42	0.00	11.99	13.53	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
INVESTORS EXCHANGE (IEXG)	2.19	0.00	3.29	0.01	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NASDAQ OMX BX (XBQS)	0.25	0.00	0.38	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE NATIONAL, INC. (XCIS)	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

NYSE ARCA (ARCX):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE BATY OPTIONS EXCHANGE (BATY):

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CBOE EDGX OPTIONS EXCHANGE (EDGX):

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NEW YORK STOCK EXCHANGE, INC. (XNYS):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NASDAQ - ALL MARKETS (XNAS):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE EDGA OPTIONS EXCHANGE (EDGA):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

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CBOE BATS OPTIONS EXCHANGE (BATS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

INVESTORS EXCHANGE (IEXG):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NASDAQ OMX BX (XBOS):
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NYSE NATIONAL, INC. (XCIS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

April 2021

Options

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
98.73	0.00	89.30	10.70	0.00

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
NASDAQ OMX PHLX (XPHL)	6.16	0.00	6.83	0.16	0.00	2.88	0.0000	20,574.01	41.9023	52,060.59	48.2489	0.00	0.0000
MIAX XMIO, LLC (XMIO)	4.61	0.00	5.15	0.03	0.00	0.00	0.0000	5,273.07	45.8528	17,816.50	52.4015	0.00	0.0000
CBOE EDGO OPTIONS EXCHANGE (EDGO)	0.15	0.00	0.16	0.02	0.00	0.00	0.0000	2,798.60	35.8795	12,825.66	48.9529	0.00	0.0000
NYSE ARCA OPTIONS (ARCO)	44.18	0.00	45.74	31.44	0.00	0.00	0.0000	72,076.83	25.5864	121,399.84	24.5550	0.00	0.0000
CBOE GLOBAL MARKETS INC. (XCBO)	0.64	0.00	0.61	0.08	0.00	0.00	0.0000	18,243.18	49.0408	40,514.45	51.4796	0.00	0.0000
NASDAQ OPTIONS MARKET (XNDQ)	1.34	0.00	1.05	3.78	0.00	0.00	0.0000	44,958.85	40.4670	22,708.76	56.0710	0.00	0.0000
ISE (XISE)	0.11	0.00	0.12	0.06	0.00	0.00	0.0000	8,699.77	23.4495	4,879.02	28.5323	0.00	0.0000

Venue - Non-directed Order Flow	Non- Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non- Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non- Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non- Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
CBOE BATO OPTIONS EXCHANGE (BATO)	7.95	0.00	7.62	10.84	0.00	0.00	0.0000	72,363.35	52.5515	12,834.43	48.0690	0.00	0.0000
MIAX PEARL, LLC (MPRL)	4.09	0.00	3.58	8.46	0.00	0.00	0.0000	18,501.51	50.5506	11,096.84	64.8938	0.00	0.0000
NASDAQ OMX BX OPTIONS (XBXO)	0.01	0.00	0.01	0.00	0.00	0.00	0.0000	11,790.65	45.5237	244.34	81.4467	0.00	0.0000
ISE GMNI EXCHANGE (GMNI)	0.88	0.00	0.26	6.21	0.00	0.00	0.0000	9,448.40	53.0809	2,384.89	37.2639	0.00	0.0000
BOX OPTIONS EXCHANGE (XBOX)	3.32	0.00	3.72	0.00	0.00	0.00	0.0000	4,519.40	46.5918	845.35	65.0269	0.00	0.0000
NYSE AMEX OPTIONS (AMXO)	9.13	0.00	10.21	0.00	0.00	0.00	0.0000	6,365.62	41.6054	921.88	28.8088	0.00	0.0000
MIAX EMERALD, LLC (EMLD)	0.83	0.00	0.22	6.02	0.00	0.00	0.0000	4,292.30	57.2307	1,065.73	26.6433	0.00	0.0000
ISE MERCURY, LLC (MCRY)	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	114.90	28.7250	10.70	0.0000	0.00	0.0000

Material Aspects:

NASDAQ OMX PHLX (XPHL):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

MIAX XMIO, LLC (XMIO):

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CBOE EDGO OPTIONS EXCHANGE (EDGO):

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NYSE ARCA OPTIONS (ARCO):

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CBOE GLOBAL MARKETS INC. (XCBO):

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NASDAQ OPTIONS MARKET (XNDQ):

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ISE (XISE):

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CBOE BATO OPTIONS EXCHANGE (BATO):

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MIAX PEARL, LLC (MPRL):

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NASDAQ OMX BX OPTIONS (XBXO):

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ISE GMNI EXCHANGE (GMNI):

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BOX OPTIONS EXCHANGE (XBOX):

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NYSE AMEX OPTIONS (AMXO):

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MIAX EMERALD, LLC (EMLD):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

ISE MERCURY, LLC (MCRY):

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May 2021

S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non- Directed Orders	Non-Marketable Limit Orders as % of Non- Directed Orders	Other Orders as % of Non-Directed Orders
0.38	0.00	89.65	10.35	0.00

Venues

Venue - Non-directed Order Flow	Non- Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non- Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non- Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non- Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
CBOE BATY OPTIONS EXCHANGE (BATY)	3.01	0.00	3.67	0.03	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE EDGX OPTIONS EXCHANGE (EDGX)	6.96	0.00	7.69	3.59	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE BATS OPTIONS EXCHANGE (BATS)	3.32	0.00	4.04	0.01	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE EDGA OPTIONS EXCHANGE (EDGA)	5.37	0.00	6.54	0.02	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NASDAQ - ALL MARKETS (XNAS)	24.63	0.00	23.61	29.35	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
INVESTORS EXCHANGE (IEXG)	6.53	0.00	7.95	0.03	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE ARCA (ARCX)	21.58	0.00	19.88	29.43	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE MKT LLC (XASE)	12.80	0.00	10.95	21.28	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NEW YORK STOCK EXCHANGE, INC. (XNYS)	10.15	0.00	12.34	0.12	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NASDAQ OMX BX (XBOS)	0.35	0.00	0.43	0.00	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

CBOE BATY OPTIONS EXCHANGE (BATY):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

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Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE EDGA OPTIONS EXCHANGE (EDGA):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NASDAQ - ALL MARKETS (XNAS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

INVESTORS EXCHANGE (IEXG):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NYSE ARCA (ARCX):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NYSE MKT LLC (XASE):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NEW YORK STOCK EXCHANGE, INC. (XNYS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NASDAQ OMX BX (XBOS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

Non-S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
0.76	0.01	89.65	10.35	0.00

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
CBOE EDGX OPTIONS EXCHANGE (EDGX)	10.39	0.00	11.74	7.66	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE ARCA (ARCX)	27.36	0.00	25.04	33.15	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NASDAQ - ALL MARKETS (XNAS)	29.53	0.00	27.53	34.65	0.00	0.00	0.0000	3.73	3.7300	0.00	0.0000	0.00	0.0000
NEW YORK STOCK EXCHANGE, INC. (XNYS)	6.96	0.00	10.01	0.35	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE MKT LLC (XASE)	11.87	0.00	8.01	20.70	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE EDGA OPTIONS EXCHANGE (EDGA)	2.66	0.00	3.87	0.05	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
INVESTORS EXCHANGE (IEGX)	3.36	0.00	4.89	0.04	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE BATS OPTIONS EXCHANGE (BATS)	2.94	0.00	4.16	0.30	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE BATY OPTIONS EXCHANGE (BATY)	1.89	0.00	2.74	0.04	0.00	0.00	0.0000	1.61	1.6100	0.00	0.0000	0.00	0.0000
NASDAQ OMX BX (XBOS)	0.46	0.00	0.66	0.01	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

CBOE EDGX OPTIONS EXCHANGE (EDGX):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NYSE ARCA (ARCX):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NASDAQ - ALL MARKETS (XNAS):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NEW YORK STOCK EXCHANGE, INC. (XNYS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NYSE MKT LLC (XASE):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE EDGA OPTIONS EXCHANGE (EDGA):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

INVESTORS EXCHANGE (IEXG):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE BATS OPTIONS EXCHANGE (BATS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE BATY OPTIONS EXCHANGE (BATY):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NASDAQ OMX BX (XBOS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

May 2021

Options

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
98.85	0.00	89.65	10.35	0.00

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
MIAX XMIO, LLC (XMIO)	5.17	0.00	5.76	0.02	0.00	0.00	0.0000	3,576.59	48.9944	8,569.94	44.8688	0.00	0.0000
NASDAQ OMX PHLX (XPHL)	6.62	0.00	7.32	0.14	0.00	0.00	0.0000	15,423.46	43.9415	23,886.16	45.4974	0.00	0.0000
CBOE GLOBAL MARKETS INC. (XCBO)	0.55	0.00	0.50	0.09	0.00	0.00	0.0000	14,573.58	49.9095	18,785.00	44.2000	0.00	0.0000
MIAX PEARL, LLC (MPRL)	3.43	0.00	3.19	5.63	0.00	0.00	0.0000	17,140.77	51.3197	11,997.85	61.2135	0.00	0.0000
NYSE ARCA OPTIONS (ARCO)	44.08	0.00	44.03	45.19	0.00	0.00	0.0000	73,269.77	25.7539	124,593.38	24.7062	0.00	0.0000
NASDAQ OMX BX OPTIONS (XBXO)	0.01	0.00	0.01	0.00	0.00	0.00	0.0000	10,489.25	45.8046	115.76	57.8800	0.00	0.0000

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
NASDAQ OPTIONS MARKET (XNDQ)	1.56	0.00	1.04	6.10	0.00	0.00	0.0000	44,770.19	40.2972	27,544.14	58.3562	0.00	0.0000
CBOE EDGO OPTIONS EXCHANGE (EDGO)	0.08	0.00	0.09	0.01	0.00	0.00	0.0000	2,259.83	37.6638	4,953.90	48.5676	0.00	0.0000
ISE (XISE)	0.14	0.00	0.12	0.11	0.00	0.00	0.0000	7,863.57	19.5611	3,313.00	21.7961	0.00	0.0000
CBOE BATO OPTIONS EXCHANGE (BATO)	7.40	0.00	7.50	6.57	0.00	0.00	0.0000	76,500.09	50.1311	13,398.88	44.0753	0.00	0.0000
ISE GMNI EXCHANGE (GMNI)	0.83	0.00	0.37	4.90	0.00	0.00	0.0000	9,479.93	53.2580	2,587.04	32.3380	0.00	0.0000
NYSE AMEX OPTIONS (AMXO)	9.97	0.00	11.12	0.01	0.00	0.00	0.0000	6,365.96	46.4669	1,184.21	21.1466	0.00	0.0000
MIAX EMERALD, LLC (EMLD)	0.80	0.00	0.35	4.80	0.00	0.00	0.0000	4,109.08	54.7877	1,589.80	30.5731	0.00	0.0000
BOX OPTIONS EXCHANGE (XBOX)	3.66	0.00	4.08	0.00	0.00	0.00	0.0000	5,053.95	47.2332	1,088.55	72.5700	0.00	0.0000
ISE MERCURY, LLC (MCRY)	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	233.30	23.3300	26.10	0.0000	0.00	0.0000

Material Aspects:

MIAX XMIO, LLC (XMIO):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NASDAQ OMX PHLX (XPHL):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE GLOBAL MARKETS INC. (XCBO):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

MIAX PEARL, LLC (MPRL):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NYSE ARCA OPTIONS (ARCO):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NASDAQ OMX BX OPTIONS (XBOX):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NASDAQ OPTIONS MARKET (XNDQ):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE EDGO OPTIONS EXCHANGE (EDGO):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept

payment for order flow for these client orders from the executing broker who is responsible for market access

ISE (XISE):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE BAT0 OPTIONS EXCHANGE (BATO):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

ISE GMNI EXCHANGE (GMNI):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NYSE AMEX OPTIONS (AMXO):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

MIAX EMERALD, LLC (EMLD):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

BOX OPTIONS EXCHANGE (XBOX):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

ISE MERCURY, LLC (MCRY):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

June 2021

S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non- Directed Orders	Non-Marketable Limit Orders as % of Non- Directed Orders	Other Orders as % of Non-Directed Orders
0.30	0.00	89.57	10.43	0.00

Venues

Venue - Non-directed Order Flow	Non- Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non- Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/ Received for Market Orders(cents per hundred shares)	Net Payment Paid/ Received for Marketable Limit Orders(USD)	Net Payment Paid/ Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/ Received for Non- Marketable Limit Orders(USD)	Net Payment Paid/ Received for Non- Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/ Received for Other Orders(cents per hundred shares)
NASDAQ - ALL MARKETS (XNAS)	23.25	0.00	21.80	30.69	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE ARCA (ARCX)	20.35	0.00	18.34	30.67	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE MKT LLC (XASE)	11.72	0.00	9.67	22.19	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE BATS OPTIONS EXCHANGE (BATS)	3.74	0.00	4.33	0.75	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
INVESTORS EXCHANGE (IEXG)	7.73	0.00	9.15	0.50	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
CBOE EDGA OPTIONS EXCHANGE (EDGA)	5.95	0.00	6.97	0.77	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE BATY OPTIONS EXCHANGE (BATY)	3.84	0.00	4.45	0.73	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NEW YORK STOCK EXCHANGE, INC. (XNYS)	12.74	0.00	15.10	0.70	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE EDGX OPTIONS EXCHANGE (EDGX)	7.21	0.00	7.77	4.37	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NASDAQ OMX BX (XBOS)	1.05	0.00	1.09	0.82	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

NASDAQ - ALL MARKETS (XNAS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NYSE ARCA (ARCX):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NYSE MKT LLC (XASE):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE BATS OPTIONS EXCHANGE (BATS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

INVESTORS EXCHANGE (IEXG):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE EDGA OPTIONS EXCHANGE (EDGA):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE BATY OPTIONS EXCHANGE (BATY):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NEW YORK STOCK EXCHANGE, INC. (XNYS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE EDGX OPTIONS EXCHANGE (EDGX):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NASDAQ OMX BX (XBOS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

June 2021

Non-S&P 500 Stocks

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
0.89	0.01	89.57	10.43	0.00

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
CBOE EDGX OPTIONS EXCHANGE (EDGX)	9.62	0.00	12.15	7.73	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE BATS OPTIONS EXCHANGE (BATS)	2.34	0.00	4.87	0.36	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE ARCA (ARCX)	25.87	0.00	20.98	30.08	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NEW YORK STOCK EXCHANGE, INC. (XNYS)	6.75	0.00	11.84	2.79	0.00	0.00	0.0000	0.00	0.0000	0.26	0.0001	0.00	0.0000
CBOE EDGA OPTIONS EXCHANGE (EDGA)	2.37	0.00	4.96	0.33	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
INVESTORS EXCHANGE (IEXG)	3.17	0.00	6.91	0.23	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NASDAQ - ALL MARKETS (XNAS)	27.44	0.00	24.44	30.17	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
CBOE BATY OPTIONS EXCHANGE (BATY)	1.62	0.00	3.27	0.33	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NYSE MKT LLC (XASE)	17.87	0.00	8.20	25.79	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000
NASDAQ OMX BX (XBOS)	0.56	0.00	0.84	0.34	0.00	0.00	0.0000	0.00	0.0000	0.00	0.0000	0.00	0.0000

Material Aspects:

CBOE EDGX OPTIONS EXCHANGE (EDGX):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE BATS OPTIONS EXCHANGE (BATS):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NYSE ARCA (ARCX):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NEW YORK STOCK EXCHANGE, INC. (XNYS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE EDGA OPTIONS EXCHANGE (EDGA):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

INVESTORS EXCHANGE (IEXG):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NASDAQ - ALL MARKETS (XNAS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE BATY OPTIONS EXCHANGE (BATY):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NYSE MKT LLC (XASE):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NASDAQ OMX BX (XBOS):
Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

June 2021

Options

Summary

Non-Directed Orders as % of All Orders	Market Orders as % of Non-Directed Orders	Marketable Limit Orders as % of Non-Directed Orders	Non-Marketable Limit Orders as % of Non-Directed Orders	Other Orders as % of Non-Directed Orders
98.81	0.00	89.57	10.43	0.00

Venues

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
NASDAQ OMX PHLX (XPHL)	6.66	0.00	7.35	0.49	0.00	0.00	0.0000	15,269.57	41.6065	7,055.76	36.1834	0.00	0.0000
NYSE ARCA OPTIONS (ARCO)	32.75	0.00	33.37	27.42	0.00	0.00	0.0000	61,754.04	27.5442	87,561.54	24.9748	0.00	0.0000
NASDAQ OMX BX OPTIONS (XBXO)	0.10	0.00	0.07	0.42	0.00	0.00	0.0000	23,938.23	46.5724	565.14	37.6760	0.00	0.0000
CBOE BATO	12.65	0.00	12.47	14.41	0.00	0.00	0.0000	95,317.11	53.0719	14,400.12	47.3688	0.00	0.0000

Venue - Non-directed Order Flow	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)	Net Payment Paid/Received for Market Orders(USD)	Net Payment Paid/Received for Market Orders(cents per hundred shares)	Net Payment Paid/Received for Marketable Limit Orders(USD)	Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Non-Marketable Limit Orders(USD)	Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)	Net Payment Paid/Received for Other Orders(USD)	Net Payment Paid/Received for Other Orders(cents per hundred shares)
OPTIONS EXCHANGE (BATO)													
ISE GMNI EXCHANGE (GMNI)	0.73	0.00	0.39	3.76	0.00	0.00	0.0000	13,150.00	59.5023	3,726.85	41.8747	0.00	0.0000
NASDAQ OPTIONS MARKET (XNDQ)	1.74	0.00	1.29	5.82	0.00	0.00	0.0000	57,965.40	45.7140	26,382.53	57.2289	0.00	0.0000
ISE (XISE)	0.30	0.00	0.28	0.56	0.00	0.00	0.0000	11,126.43	20.3037	3,592.61	17.5249	0.00	0.0000
MIAX PEARL, LLC (MPRL)	8.12	0.00	7.44	14.31	0.00	0.00	0.0000	20,167.42	51.8443	7,376.59	54.2396	0.00	0.0000
CBOE EDGO OPTIONS EXCHANGE (EDGO)	0.12	0.00	0.08	0.42	0.00	0.00	0.0000	2,600.82	38.8182	1,232.65	49.3060	0.00	0.0000
MIAX EMERALD, LLC (EMLD)	0.67	0.00	0.34	3.65	0.00	0.00	0.0000	6,221.70	69.9067	1,651.38	33.0276	0.00	0.0000
MIAX XMIO, LLC (XMIO)	5.67	0.00	6.25	0.44	0.00	0.00	0.0000	4,741.79	45.5941	2,489.18	28.6113	0.00	0.0000
CBOE GLOBAL MARKETS INC. (XCBO)	0.40	0.00	0.36	0.20	0.00	0.00	0.0000	14,021.94	48.5188	7,166.85	41.6677	0.00	0.0000
BOX OPTIONS EXCHANGE (XBOX)	4.40	0.00	4.85	0.42	0.00	0.00	0.0000	7,265.15	51.1630	2,201.40	45.8625	0.00	0.0000
NYSE AMEX OPTIONS (AMXO)	11.42	0.00	12.65	0.45	0.00	0.00	0.0000	12,953.60	47.4491	2,546.40	20.2095	0.00	0.0000
ISE MERCURY, LLC (MCRY)	0.09	0.00	0.05	0.43	0.00	0.00	0.0000	1,082.93	30.0814	215.69	19.6082	0.00	0.0000

Material Aspects:

NASDAQ OMX PHLX (XPHL):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NYSE ARCA OPTIONS (ARCO):

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NASDAQ OMX BX OPTIONS (XBXO):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE BATO OPTIONS EXCHANGE (BATO):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

ISE GMNI EXCHANGE (GMNI):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NASDAQ OPTIONS MARKET (XNDQ):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept

payment for order flow for these client orders from the executing broker who is responsible for market access

ISE (XISE):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

MIAX PEARL, LLC (MPRL):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE EDGO OPTIONS EXCHANGE (EDGO):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

MIAX EMERALD, LLC (EMLD):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

MIAX XMIO, LLC (XMIO):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

CBOE GLOBAL MARKETS INC. (XCBO):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

BOX OPTIONS EXCHANGE (XBOX):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

NYSE AMEX OPTIONS (AMXO):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access

ISE MERCURY, LLC (MCRY):

Note regarding Payment for Order Flow Practices The Firm, in its efforts to seek best execution, routes client orders to national securities exchanges, alternative trading systems (ATSs), including electronic communications networks (ECNs) and other market centers. The Firm may accept payment for order flow for these client orders from the executing broker who is responsible for market access