



Material Aspects:

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## April 2023

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### 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
100.00	1.66	0.00	57.26	41.08

#### 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 ISE (XISX)	39.00	0.00	0.00	42.03	36.36	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NYSE Mkt Llc (XASE)	26.56	25.00	0.00	24.64	29.29	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq PHLX (XPHO)	11.20	25.00	0.00	11.59	10.10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE Exchange (XCBO)	8.71	0.00	0.00	8.70	9.09	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MIAX Emerald, LLC. (EMLD)	7.88	0.00	0.00	8.70	7.07	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Miami Intl Exchange (XMIO)	4.15	0.00	0.00	4.35	4.04	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
C2 Options Exchange, Inc. (C2OX)	0.83	0.00	0.00	0.00	2.02	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe BZX Options Exchange (BATO)	0.41	0.00	0.00	0.00	1.01	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MIAX Pearl, LLC (MPRL)	0.41	25.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq OMX (XBXO)	0.41	25.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects:

## May 2023

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### 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
0.00	0.00	0.00	0.00	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)
XPSE (XPSE)	5.34	0.86	11.48	7.70	5.18	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MIAX Pearl, LLC (MPRL)	4.72	2.74	3.85	5.03	5.53	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MIAX Emerald, LLC. (EMLD)	4.14	2.96	4.44	5.34	4.18	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe BZX Options Exchange (BATO)	4.09	1.21	7.69	5.58	4.07	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX (EDGX)	2.97	3.52	1.57	2.29	3.22	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NSDO (NSDO)	1.96	0.43	1.73	1.03	2.84	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq GEMX, LLC (GMNI)	1.51	1.35	1.46	1.68	1.54	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
XBFO (XBFO)	1.37	2.29	1.46	0.96	1.14	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
XJAS (XJAS)	1.31	0.38	3.79	2.36	0.90	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
XSFJ (XSFJ)	1.23	0.67	3.09	1.85	0.92	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects:

## June 2023

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### 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
100.00	100.00	0.00	0.00	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 Exchange (XCBO)	100.00	100.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects:

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## June 2023

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### 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

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
100.00	0.00	0.00	0.00	100.00

#### 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 Exchange (XCBO)	100.00	0.00	0.00	0.00	100.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

#### Material Aspects:

June 2023

#### 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
100.00	27.72	13.74	17.61	40.94

#### 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 Exchange (XCBO)	18.64	15.86	17.96	18.91	20.64	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq PHLX (XPHO)	12.29	18.81	8.93	7.64	10.99	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NYSE Mkt Llc (XASE)	8.77	11.83	6.75	6.51	8.35	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
XPSE (XPSE)	8.53	2.10	15.75	11.86	9.02	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Miami Intl Exchange (XMIO)	8.45	10.77	4.64	10.87	7.12	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe BZX Options Exchange (BATO)	7.95	1.53	16.65	11.94	7.67	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MIAX Emerald, LLC. (EMLD)	7.58	3.74	9.72	11.32	7.84	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MIAX Pearl, LLC (MPRL)	4.47	4.41	4.28	4.08	4.75	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq OMX (XBXO)	4.34	6.44	2.07	1.16	5.05	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX (EDGX)	3.32	5.68	2.25	1.16	3.02	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
BOX Exchange (XBOX)	2.18	1.73	1.09	3.20	2.42	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq GEMX, LLC (GMNI)	1.66	2.91	0.87	0.79	1.46	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe EDGX Options (EDGO)	1.46	1.55	0.87	1.70	1.50	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
C2 Options Exchange, Inc. (C2OX)	1.21	1.91	0.73	0.42	1.24	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

#### Material Aspects: