# **CHUB - Held NMS Stocks and Options Order Routing Public Report**

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1st Quarter, 2021

# January 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
100.00	27.89	0.00	1.65	70.46

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)
Citadel Securities, LLC (CDRG)	100.00	29.81	0.00	0.00	70.19	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX Exchange, Inc. (EDGX)	100.00	0.00	0.00	100.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	100.00	31.71	0.00	0.00	68.29	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Execution Services, LLC (INET)	100.00	0.00	0.00	58.33	41.67	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jane Street Capital, LLC. (JNST)	100.00	34.00	0.00	0.00	66.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas LLC. (NITE)	100.00	24.03	0.00	0.00	75.97	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	100.00	0.00	0.00	50.00	50.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STATE STREET GLOBAL MARKETS, L (PULX)	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
Two Sigma Securities, LLC (SOHO)	100.00	29.41	0.00	0.00	70.59	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities LLC (UBSS)	100.00	37.50	0.00	0.00	62.50	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects:			

# January 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
100.00	39.54	0.11	0.90	59.44

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 American (AMEX) (AMEX)	100.00	0.00	0.00	100.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NYSE Arca (ARCA)	100.00	0.00	0.00	100.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Citadel Securities, LLC (CDRG)	100.00	39.11	0.11	0.00	60.78	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX Exchange, Inc. (EDGX)	100.00	0.00	0.00	61.54	38.46	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	100.00	50.63	0.00	0.00	49.37	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Execution Services, LLC (INET)	100.00	0.00	0.00	95.24	4.76	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jane Street Capital, LLC. (JNST)	100.00	40.79	0.57	0.00	58.64	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas LLC. (NITE)	100.00	39.52	0.00	0.00	60.48	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	100.00	0.00	0.00	28.57	71.43	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STATE STREET GLOBAL MARKETS, L (PULX)	100.00	66.67	0.00	0.00	33.33	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Two Sigma Securities, LLC (SOHO)	100.00	40.00	0.00	0.00	60.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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)
UBS Securities LLC (UBSS)	100.00	40.00	0.00	0.00	60.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

# January 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
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)
Citadel Securities, LLC (CDRG)	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
CES (CES)	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:

# February 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
100.00	27.53	0.39	0.75	71.33

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

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)
Citadel Securities, LLC (CDRG)	52.86	54.45	57.14	0.00	52.77	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas LLC. (NITE)	22.85	22.47	14.29	3.70	23.24	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jane Street Capital, LLC. (JNST)	12.68	13.16	28.57	0.00	12.54	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities LLC (UBSS)	3.68	4.86	0.00	7.41	3.20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	3.34	2.23	0.00	0.00	3.83	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Two Sigma Securities, LLC (SOHO)	3.32	2.63	0.00	0.00	3.63	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Execution Services, LLC (INET)	0.56	0.00	0.00	37.04	0.39	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	0.33	0.00	0.00	14.81	0.31	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX Exchange, Inc. (EDGX)	0.28	0.00	0.00	37.04	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STATE STREET GLOBAL MARKETS, L (PULX)	0.06	0.20	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SKNY (SKNY)	0.06	0.00	0.00	0.00	0.08	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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# February 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
I	100.00	37.47	0.12	1.45	60.96

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)
Citadel Securities, LLC (CDRG)	51.89	54.26	16.67	2.04	51.70	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas LLC. (NITE)	23.06	22.06	16.67	1.36	24.20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jane Street Capital, LLC. (JNST)	11.37	11.35	33.33	0.68	11.60	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities LLC (UBSS)	5.22	4.70	16.67	0.00	5.64	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	3.26	4.01	0.00	0.00	2.89	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Two Sigma Securities, LLC (SOHO)	3.23	3.01	16.67	0.00	3.42	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Execution Services, LLC (INET)	0.64	0.00	0.00	36.73	0.18	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX Exchange, Inc. (EDGX)	0.58	0.00	0.00	40.14	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	0.29	0.00	0.00	12.93	0.16	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STATE STREET GLOBAL MARKETS, L (PULX)	0.27	0.50	0.00	0.00	0.13	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NYSE Arca (ARCA)	0.06	0.00	0.00	2.04	0.05	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NYSE American (AMEX) (AMEX)	0.05	0.00	0.00	3.40	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Instinet, LLC (BLKX)	0.05	0.11	0.00	0.00	0.02	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe BZX Exchange, Inc. (BATS)	0.01	0.00	0.00	0.68	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SKNY (SKNY)	0.01	0.00	0.00	0.00	0.02	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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# February 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
100.00	85.71	0.00	14.29	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)
Citadel Securities, LLC (CDRG)	28.57	16.67	0.00	100.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dash Financial Technologies LL (DFIN)	28.57	33.33	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CES (CES)	14.29	16.67	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
GEB (GEB)	14.29	16.67	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Susquehanna Capital Group (SUSQ)	14.29	16.67	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Material Aspects:

## March 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
100.00	54.64	0.04	4.46	40.86

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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)
Citadel Securities, LLC (CDRG)	23.18	7.93	0.00	0.00	46.13	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas LLC. (NITE)	11.86	4.09	66.67	0.62	23.42	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jane Street Capital, LLC. (JNST)	6.93	2.29	33.33	0.00	13.87	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Goldman Sachs & Co. LLC (SGMT)	6.43	10.90	0.00	0.00	1.16	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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)
Intelligent Cross LLC (INCR)	6.00	10.55	0.00	0.00	0.58	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Credit Suisse Securities (USA) (FBCO)	5.74	10.14	0.00	3.43	0.10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MORGAN STANLEY & CO. LLC (MSPL)	5.68	8.01	0.00	0.00	3.20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CBOE EDGX Exchange, Inc. (EDGX)	5.64	2.67	0.00	73.52	2.21	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Barclays Capital Inc./Le (LATS)	4.76	8.54	0.00	0.00	0.24	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
J.P. Morgan Securities LLC (JPMS)	4.71	8.49	0.00	0.00	0.17	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Merrill Lynch, Pierce, Fenner (MLIX)	3.54	6.48	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
IEXX (IEXX)	3.04	5.34	0.00	2.80	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EBX LLC (EBXL)	2.92	5.34	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Two Sigma Securities, LLC (SOHO)	1.78	0.71	0.00	0.62	3.33	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Execution Services, LLC (INET)	1.53	2.47	0.00	2.80	0.14	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	1.39	0.58	0.00	0.00	2.62	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
KCG AMERICAS LLC (KCGM)	1.26	2.24	0.00	0.00	0.10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities LLC (UBSS)	0.99	0.20	0.00	0.00	2.14	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
BIDS TRADING L.P. (BIDS)	0.46	0.74	0.00	0.00	0.14	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CODA (CODA)	0.40	0.74	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
INSTINET, LLC (INCA)	0.39	0.71	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ITG Inc. (ITGI)	0.39	0.71	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LIQUIDNET, INC. (LQNA)	0.39	0.00	0.00	8.72	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
New York Stock Exchange (NYSE)	0.22	0.00	0.00	0.93	0.44	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas LLC. (VALR)	0.21	0.00	0.00	4.36	0.03	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.10	0.00	0.00	2.18	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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)
MORGAN STANLEY & CO. LLC (MSCO)													
NYSE Arca (ARCA)	0.06	0.10	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STATE STREET GLOBAL MARKETS, L (PULX)	0.01	0.03	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

## March 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
ĺ	100.00	36.36	0.05	1.09	62.50

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)
Citadel Securities, LLC (CDRG)	50.88	50.63	0.00	2.82	51.91	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Virtu Americas LLC. (NITE)	25.46	27.01	33.33	1.41	24.98	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jane Street Capital, LLC. (JNST)	13.66	12.93	66.67	0.00	14.29	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Two Sigma Securities, LLC (SOHO)	3.63	3.68	0.00	0.00	3.66	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
UBS Securities LLC (UBSS)	2.57	2.54	0.00	0.00	2.63	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
G1 Execution Services, LLC (ETMM)	2.38	2.83	0.00	0.00	2.16	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Nasdaq Execution Services, LLC (INET)	0.52	0.00	0.00	42.25	0.10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.41	0.00	0.00	36.62	0.02	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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 EDGX Exchange, Inc. (EDGX)													
New York Stock Exchange (NYSE)	0.22	0.00	0.00	11.27	0.15	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STATE STREET GLOBAL MARKETS, L (PULX)	0.18	0.38	0.00	0.00	0.07	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cboe BZX Exchange, Inc. (BATS)	0.06	0.00	0.00	5.63	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NYSE Arca (ARCA)	0.02	0.00	0.00	0.00	0.02	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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## March 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
100.00	50.00	0.00	50.00	0.00

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)
MORGAN STANLEY & CO. LLC (MSCO)	25.00	0.00	0.00	50.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Citadel Securities, LLC (CDRG)	12.50	25.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CES (CES)	12.50	25.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dash Financial Technologies LL (DFIN)	12.50	0.00	0.00	25.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
GEB (GEB)	12.50	25.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Susquehanna Capital Group (SUSQ)	12.50	25.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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)
WOLVERINE EXECUTION SERVICES, (WEXX)	12.50	0.00	0.00	25.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000