

October 2022

S&P 500 Stocks  
Summary

Total Non-Directed Orders	Non-Directed Orders as % of All Orders	Total Market Orders	Market Orders as % of Non-Directed Orders	Total Marketable Limit Orders
740	100.00	740	100.00	0

Venues

Venue - Non-directed Order Flow	Non-Directed Orders	Non-Directed Orders(%)	Market Orders	Market Orders(%)
Citadel Securities LLC(CDRG)	258	34.77	258	34.86
G1 Execution Services, LLC(ETMM)	192	25.88	192	25.95
VIRTU Americas, LLC(NITE)	189	25.47	189	25.54
Jane Street Capital, LLC(JNST)	85	11.46	85	11.49
Two Sigma Securities, LLC(SOHO)	10	1.35	10	1.35
UBS Securities, LLC(UBSS)	6	0.81	6	0.81
Instinet				
BlockCross(BLKX)	2	0.27	0	0.00

October 2022

Non-S&P 500 Stocks

## Summary

Total Non-Directed Orders	Non-Directed Orders as % of All Orders	Total Market Orders	Market Orders as % of Non-Directed Orders	Total Marketable Limit Orders
273	100.00	273	100.00	0

## Venues

Venue - Non-directed Order Flow	Non-Directed Orders	Non-Directed Orders(%)	Market Orders	Market Orders(%)
Citadel Securities LLC(CDRG)	93	33.94	93	34.07
VIRTU Americas, LLC(NITE)	70	25.55	70	25.64
G1 Execution Services, LLC(ETMM)	68	24.82	68	24.91
Jane Street Capital, LLC(JNST)	38	13.87	38	13.92
UBS Securities, LLC(UBSS)	3	1.09	3	1.10
Instinet				
BlockCross(BLKX)	1	0.36	0	0.00
Two Sigma Securities, LLC(SOHO)	1	0.36	1	0.37

## October 2022

### Option Contracts Summary

Total Non-Directed Orders	Non-Directed Orders as % of All Orders	Total Market Orders	Market Orders as % of Non-Directed Orders	Total Marketable Limit Orders
0	0.00	0	0.00	0

## Venues

Venue - Non-directed Order Flow	Non-Directed Orders	Non-Directed Orders(%)	Market Orders	Market Orders(%)
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November 2022

S&P 500 Stocks  
Summary

Total Non-Directed Orders	Non-Directed Orders as % of All Orders	Total Market Orders	Market Orders as % of Non-Directed Orders	Total Marketable Limit Orders
104	100.00	104	100.00	0

Venues

Venue - Non-directed Order Flow	Non-Directed Orders	Non-Directed Orders(%)	Market Orders	Market Orders(%)
Citadel Securities LLC(CDRG)	43	41.35	43	41.35
VIRTU Americas, LLC(NITE)	29	27.88	29	27.88
G1 Execution Services, LLC(ETMM)	20	19.23	20	19.23
Jane Street Capital, LLC(JNST)	11	10.58	11	10.58
UBS Securities, LLC(UBSS)	1	0.96	1	0.96

November 2022

Non-S&P 500 Stocks  
Summary

Total Non-Directed Orders	Non-Directed Orders as % of All Orders	Total Market Orders	Market Orders as % of Non-Directed Orders	Total Marketable Limit Orders
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823	100.00	823	100.00	0
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**Venues**

Venue - Non-directed Order Flow	Non-Directed Orders	Non-Directed Orders(%)	Market Orders	Market Orders(%)
<b>Citadel Securities LLC(CDRG)</b>	290	34.44	290	35.24
<b>VIRTU Americas, LLC(NITE)</b>	210	24.94	210	25.52
<b>G1 Execution Services, LLC(ETMM)</b>	194	23.04	194	23.57
<b>Jane Street Capital, LLC(JNST)</b>	112	13.30	112	13.61
<b>Instinet BlockCross(BLKX)</b>	19	2.26	0	0.00
<b>Two Sigma Securities, LLC(SOHO)</b>	12	1.43	12	1.46
<b>UBS Securities, LLC(UBSS)</b>	5	0.59	5	0.61

**November 2022**

**Option Contracts Summary**

Total Non-Directed Orders	Non-Directed Orders as % of All Orders	Total Market Orders	Market Orders as % of Non-Directed Orders	Total Marketable Limit Orders
0	0.00	0	0.00	0

**Venues**

Venue - Non-directed Order Flow	Non-Directed Orders	Non-Directed Orders(%)	Market Orders	Market Orders(%)
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**December 2022**

**S&P 500 Stocks  
Summary**

<b>Total Non-Directed Orders</b>	<b>Non-Directed Orders as % of All Orders</b>	<b>Total Market Orders</b>	<b>Market Orders as % of Non-Directed Orders</b>	<b>Total Marketable Limit Orders</b>
148	100.00	148	100.00	0

**Venues**

<b>Venue - Non-directed Order Flow</b>	<b>Non-Directed Orders</b>	<b>Non-Directed Orders(%)</b>	<b>Market Orders</b>	<b>Market Orders(%)</b>
<b>Citadel Securities LLC(CDRG)</b>	55	37.16	55	37.16
<b>VIRTU Americas, LLC(NITE)</b>	46	31.08	46	31.08
<b>G1 Execution Services, LLC(ETMM)</b>	33	22.30	33	22.30
<b>Jane Street Capital, LLC(JNST)</b>	12	8.11	12	8.11
<b>Two Sigma Securities, LLC(SOHO)</b>	2	1.35	2	1.35

**December 2022**

**Non-S&P 500 Stocks  
Summary**

<b>Total Non-Directed Orders</b>	<b>Non-Directed Orders as % of All Orders</b>	<b>Total Market Orders</b>	<b>Market Orders as % of Non-Directed Orders</b>	<b>Total Marketable Limit Orders</b>
993	100.00	993	100.00	0

**Venues**

Venue - Non-directed Order Flow	Non-Directed Orders	Non-Directed Orders(%)	Market Orders	Market Orders(%)
Citadel Securities LLC(CDRG)	359	35.69	359	36.15
VIRTU Americas, LLC(NITE)	275	27.34	275	27.69
G1 Execution Services, LLC(ETMM)	228	22.66	228	22.96
Jane Street Capital, LLC(JNST)	113	11.23	113	11.38
Instinet BlockCross(BLKX)	13	1.29	0	0.00
Two Sigma Securities, LLC(SOHO)	8	0.80	8	0.81
INTL Trading, Inc.(INTL)	5	0.50	5	0.50
UBS Securities, LLC(UBSS)	5	0.50	5	0.50

**December 2022**

**Option Contracts Summary**

Total Non-Directed Orders	Non-Directed Orders as % of All Orders	Total Market Orders	Market Orders as % of Non-Directed Orders	Total Marketable Limit Orders
0	0.00	0	0.00	0

**Venues**

Venue - Non-directed Order Flow	Non-Directed Orders	Non-Directed Orders(%)	Market Orders	Market Orders(%)
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**Marketable Limit  
Orders as % of Non-  
Directed Orders**      **Total Non-Marketable Limit Orders**  
0.00

**Non-Marketable  
Limit Orders as % of  
Non-Directed Orders**  
0      0.00

**Marketable Limit  
Orders**      **Marketable Limit Orders(%)**

**Non-Marketable  
Limit Orders**

0	0.00	0
0	0.00	0
0	0.00	0
0	0.00	0
0	0.00	0
0	0.00	0
0	0.00	0

**Marketable Limit  
Orders as % of Non-  
Directed Orders**      **Total Non-Marketable Limit Orders**  
0.00

**Non-Marketable  
Limit Orders as % of  
Non-Directed Orders**  
0      0.00

**Marketable Limit  
Orders**

**Marketable Limit Orders(%)**

**Non-Marketable  
Limit Orders**

**Marketable Limit  
Orders as % of Non-  
Directed Orders**

**Total Non-Marketable Limit Orders**

**Non-Marketable  
Limit Orders as % of  
Non-Directed Orders**

0.00

0

0.00

**Marketable Limit  
Orders**

**Marketable Limit Orders(%)**

**Non-Marketable  
Limit Orders**

0

0.00

0

0

0.00

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0.00

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0.00

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**Marketable Limit  
Orders as % of Non-  
Directed Orders**

**Total Non-Marketable Limit Orders**

**Non-Marketable  
Limit Orders as % of  
Non-Directed Orders**

0.00

0

0.00

**Marketable Limit  
Orders**

**Marketable Limit Orders(%)**

**Non-Marketable  
Limit Orders**

0

0.00

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0.00

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**Marketable Limit  
Orders as % of Non-  
Directed Orders**

**Total Non-Marketable Limit Orders**

**Non-Marketable  
Limit Orders as % of  
Non-Directed Orders**

0.00

0

0.00

**Marketable Limit  
Orders**

**Marketable Limit Orders(%)**

**Non-Marketable  
Limit Orders**

**Marketable Limit  
Orders as % of Non-  
Directed Orders**      **Total Non-Marketable Limit Orders**  
0.00

**Non-Marketable  
Limit Orders as % of  
Non-Directed Orders**  
0      0.00

**Marketable Limit  
Orders**      **Marketable Limit Orders(%)**  
0  
0  
0  
0  
0

**Non-Marketable  
Limit Orders**  
0.00      0  
0.00      0  
0.00      0  
0.00      0  
0.00      0

**Marketable Limit  
Orders as % of Non-  
Directed Orders**      **Total Non-Marketable Limit Orders**  
0.00

**Non-Marketable  
Limit Orders as % of  
Non-Directed Orders**  
0      0.00

**Marketable Limit  
Orders**

**Marketable Limit Orders(%)**

**Non-Marketable  
Limit Orders**

0

0.00

0

0

0.00

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0

**Marketable Limit  
Orders as % of Non-  
Directed Orders**

0.00

**Total Non-Marketable Limit Orders**

**Non-Marketable  
Limit Orders as % of  
Non-Directed Orders**

0

0.00

**Marketable Limit  
Orders**

**Marketable Limit Orders(%)**

**Non-Marketable  
Limit Orders**

	<b>Other Orders as % of</b>
<b>Total Other Orders</b>	<b>Non-Directed Orders</b>
0	0.00

<b>Non-Marketable Limit Orders(%)</b>	<b>Other Orders</b>	<b>Other Orders(%)</b>	<b>Net Payment Paid/Received for Market Orders(USD)</b>	<b>Net Payment Paid/Received for Market Orders(cents per hundred shares)</b>
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	2	100.00	0	0

<b>Total Other Orders</b>	<b>Other Orders as % of Non-Directed Orders</b>
0	0.00

<b>Non-Marketable Limit Orders(%)</b>	<b>Other Orders</b>	<b>Other Orders(%)</b>	<b>Net Payment Paid/Received for Market Orders(USD)</b>	<b>Net Payment Paid/Received for Market Orders(cents per hundred shares)</b>
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	1	100.00	0	0
0.00	0	0.00	0	0

<b>Total Other Orders</b>	<b>Other Orders as % of Non-Directed Orders</b>
0	0.00

<b>Non-Marketable Limit Orders(%)</b>	<b>Other Orders</b>	<b>Other Orders(%)</b>	<b>Net Payment Paid/Received for Market Orders(USD)</b>	<b>Net Payment Paid/Received for Market Orders(cents per hundred shares)</b>
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<b>Total Other Orders</b>	<b>Other Orders as % of Non-Directed Orders</b>
0	0.00

<b>Non-Marketable Limit Orders(%)</b>	<b>Other Orders</b>	<b>Other Orders(%)</b>	<b>Net Payment Paid/Received for Market Orders(USD)</b>	<b>Net Payment Paid/Received for Market Orders(cents per hundred shares)</b>
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0

<b>Total Other Orders</b>	<b>Other Orders as % of Non-Directed Orders</b>
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0 0.00

<b>Non-Marketable Limit Orders(%)</b>	<b>Other Orders</b>	<b>Other Orders(%)</b>	<b>Net Payment Paid/Received for Market Orders(USD)</b>	<b>Net Payment Paid/Received for Market Orders(cents per hundred shares)</b>
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	19	100.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0

**Other Orders as % of  
Total Other Orders Non-Directed Orders**  
0 0.00

<b>Non-Marketable Limit Orders(%)</b>	<b>Other Orders</b>	<b>Other Orders(%)</b>	<b>Net Payment Paid/Received for Market Orders(USD)</b>	<b>Net Payment Paid/Received for Market Orders(cents per hundred shares)</b>
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	<b>Other Orders as % of</b>	
<b>Total Other Orders</b>	<b>Non-Directed Orders</b>	
0	0.00	

<b>Non-Marketable Limit Orders(%)</b>	<b>Other Orders</b>	<b>Other Orders(%)</b>	<b>Net Payment Paid/Received for Market Orders(USD)</b>	<b>Net Payment Paid/Received for Market Orders(cents per hundred shares)</b>
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0

	<b>Other Orders as % of</b>	
<b>Total Other Orders</b>	<b>Non-Directed Orders</b>	
0	0.00	

<b>Non-Marketable Limit Orders(%)</b>	<b>Other Orders</b>	<b>Other Orders(%)</b>	<b>Net Payment Paid/Received for Market Orders(USD)</b>	<b>Net Payment Paid/Received for Market Orders(cents per hundred shares)</b>
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	13	100.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0
0.00	0	0.00	0	0

<b>Total Other Orders</b>	<b>Other Orders as % of Non-Directed Orders</b>
0	0.00

<b>Non-Marketable Limit Orders(%)</b>	<b>Other Orders</b>	<b>Other Orders(%)</b>	<b>Net Payment Paid/Received for Market Orders(USD)</b>	<b>Net Payment Paid/Received for Market Orders(cents per hundred shares)</b>
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<b>Net Payment Paid/Received for Marketable Limit Orders(USD)</b>	<b>Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)</b>	<b>Net Payment Paid/Received for Non-Marketable Limit Orders(USD)</b>	<b>Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)</b>	<b>Net Payment Paid/Received for Other Orders(USD)</b>
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<b>Net Payment Paid/Received for Marketable Limit Orders(USD)</b>	<b>Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)</b>	<b>Net Payment Paid/Received for Non-Marketable Limit Orders(USD)</b>	<b>Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)</b>	<b>Net Payment Paid/Received for Other Orders(USD)</b>
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

<b>Net Payment Paid/Received for Marketable Limit Orders(USD)</b>	<b>Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)</b>	<b>Net Payment Paid/Received for Non-Marketable Limit Orders(USD)</b>	<b>Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)</b>	<b>Net Payment Paid/Received for Other Orders(USD)</b>
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

<b>Net Payment Paid/Received for Marketable Limit Orders(USD)</b>	<b>Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)</b>	<b>Net Payment Paid/Received for Non-Marketable Limit Orders(USD)</b>	<b>Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)</b>	<b>Net Payment Paid/Received for Other Orders(USD)</b>
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<b>Net Payment Paid/Received for Marketable Limit Orders(USD)</b>	<b>Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)</b>	<b>Net Payment Paid/Received for Non-Marketable Limit Orders(USD)</b>	<b>Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)</b>	<b>Net Payment Paid/Received for Other Orders(USD)</b>
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

<b>Net Payment Paid/Received for Marketable Limit Orders(USD)</b>	<b>Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)</b>	<b>Net Payment Paid/Received for Non-Marketable Limit Orders(USD)</b>	<b>Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)</b>	<b>Net Payment Paid/Received for Other Orders(USD)</b>
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

<b>Net Payment Paid/Received for Marketable Limit Orders(USD)</b>	<b>Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)</b>	<b>Net Payment Paid/Received for Non-Marketable Limit Orders(USD)</b>	<b>Net Payment Paid/Received for Non-Marketable Limit Orders(cents per hundred shares)</b>	<b>Net Payment Paid/Received for Other Orders(USD)</b>
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**Net Payment  
Paid/Received for  
Other Orders(cents  
per hundred shares)**

0

0

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0

0

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0

**Net Payment  
Paid/Received for  
Other Orders(cents  
per hundred shares)**

0

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**Net Payment  
Paid/Received for  
Other Orders(cents  
per hundred shares)**

**Net Payment  
Paid/Received for  
Other Orders(cents  
per hundred shares)**

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**Net Payment  
Paid/Received for  
Other Orders(cents  
per hundred shares)**

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**Net Payment  
Paid/Received for  
Other Orders(cents  
per hundred shares)**

**Net Payment  
Paid/Received for  
Other Orders(cents  
per hundred shares)**

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**Net Payment  
Paid/Received for  
Other Orders(cents  
per hundred shares)**

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**Net Payment  
Paid/Received for  
Other Orders(cents  
per hundred shares)**