

# Alpaca Securities LLC - Held NMS Stocks and Options Order Routing Public Report

Generated on Mon Oct 24 2022 08:30:30 GMT-0400 (Eastern Daylight Time)

3rd Quarter, 2022

July 2022

## 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	61.16	13.22	17.47	8.15

### 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)
Virtu Americas, LLC (NITE)	35.11	30.14	34.74	40.19	62.14	2,201.27	20.0000	548.55	19.9996	831.07	19.8175	427.83	14.1438
Citadel Securities LLC (CDRG)	35.70	35.52	44.16	42.37	9.02	2,504.22	19.3057	466.86	13.3906	839.76	18.9963	30.25	6.8885
Jane Street Capital, LLC (JNST)	19.40	22.46	8.88	14.22	24.69	1,640.36	20.0000	140.19	20.0000	296.67	20.0000	231.94	19.2960
UBS Securities LLC (UBSS)	9.79	11.89	12.22	3.22	4.15	813.87	18.7476	154.93	16.0612	43.22	12.8478	34.68	17.1593

### Material Aspects:

Virtu Americas, LLC (NITE):

Alpaca Securities receives revenue from third-party liquidity providers based on the order flow execution received at each destination. While rebate rates are substantially similar amongst the liquidity providers they may vary based on order characteristics (such as the price of execution, marketability, and other characteristics). There is a potential conflict of interest to a market maker such as Virtu both paying for order flow and providing price improvement, as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Alpaca Securities LLC customer orders. Accordingly, from such anticipated profit, a market maker such as Virtu can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Virtu's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one subcategory will result in a decreased allocation to one or more of the other categories

Citadel Securities LLC (CDRG):

Alpaca Securities receives revenue from third party liquidity providers based on the order flow execution received at each destination. While rebate rates are substantially similar amongst the liquidity providers they may vary based on order characteristics (such as price of execution, marketability and other characteristics). There is a potential conflict inherent to a market maker such as Citadel both paying for order flow and providing price improvement, as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Alpaca Securities LLC customer orders. Accordingly, from such anticipated profit, a market maker such as Citadel can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Citadel's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one subcategory will result in a decreased allocation to one or more of the other categories.

Jane Street Capital, LLC (JNST):

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July 2022

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	53.15	17.14	21.05	8.66

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)
Virtu Americas, LLC (NITE)	31.37	25.77	34.04	30.07	63.62	18,368.22	15.0641	8,054.36	15.5120	6,290.62	11.1635	3,139.13	6.4034
Citadel Securities LLC (CDRG)	31.68	29.72	38.92	37.17	16.08	19,536.44	13.8957	7,904.11	13.3130	7,135.54	10.2441	-631.65	-5.0982
Jane Street Capital, LLC (JNST)	25.94	30.93	19.98	21.79	17.13	20,453.14	13.9752	3,448.54	11.3136	4,606.15	11.2779	1,611.75	12.2114
UBS Securities LLC (UBSS)	11.01	13.58	7.06	10.97	3.17	8,292.04	12.9049	790.29	7.3370	1,046.62	5.0884	266.70	10.9221

Material Aspects:

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July 2022

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
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)
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Material Aspects:

August 2022

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	60.74	10.34	21.53	7.38

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)
Virtu Americas, LLC (NITE)	24.67	19.50	29.19	32.88	36.97	2,018.50	20.0000	514.55	19.9988	1,191.47	19.7462	253.74	10.9051
Citadel Securities LLC (CDRG)	34.54	33.21	36.29	44.88	12.81	3,310.80	19.2580	601.06	18.7897	1,579.12	19.1755	85.16	10.5608
Jane Street Capital, LLC (JNST)	29.65	33.13	22.01	18.69	43.64	3,430.38	20.0000	388.01	20.0000	685.98	20.0000	523.86	19.0719

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UBS Securities LLC (UBSS)	11.14	14.16	12.50	3.54	6.57	1,340.69	18.2891	180.47	16.3799	64.52	9.9229	59.72	14.4363

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August 2022

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	58.33	12.69	21.09	7.89

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)
Virtu Americas, LLC (NITE)	22.79	19.16	22.28	24.89	44.85	17,933.07	15.5524	4,835.20	16.5777	7,015.49	12.9591	2,280.52	6.2467

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)	31.50	30.57	36.42	39.33	9.52	28,322.56	15.3983	6,041.28	12.6709	10,067.30	11.7695	462.19	5.9616
Jane Street Capital, LLC (JNST)	32.30	34.75	26.78	26.84	37.56	31,432.86	15.0315	5,856.68	16.7019	8,440.33	14.4599	5,104.83	16.6951
UBS Securities LLC (UBSS)	13.41	15.51	14.52	8.94	8.07	11,790.96	12.6329	1,517.02	7.9813	1,557.69	8.0075	764.18	11.6382

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August 2022

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
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)
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Material Aspects:

September 2022

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	54.39	8.36	27.92	9.33

Venues

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Virtu Americas, LLC (NITE)	27.08	20.94	24.22	35.73	39.58	2,863.50	37.446	713.69	52.5134	1,321.41	19.7229	575.87	23.2214
Citadel Securities LLC (CDRG)	41.50	43.45	46.99	45.40	13.53	4,100.05	25.8353	679.61	25.7746	2,181.65	25.6279	171.75	20.2508
Jane Street Capital, LLC (JNST)	31.42	35.61	28.79	18.87	46.89	4,491.00	34.5292	547.45	33.8930	707.77	20.0000	1,031.28	35.0980

Material Aspects:

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Alpaca Securities receives revenue from third-party liquidity providers based on the order flow execution received at each destination. While rebate rates are substantially similar amongst the liquidity providers they may vary based on order characteristics (such as the price of execution, marketability, and other characteristics). There is a potential conflict of interest to a market maker such as Virtu both paying for order flow and providing price improvement, as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Alpaca Securities LLC customer orders. Accordingly, from such anticipated profit, a market maker such as Virtu can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Virtu's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one subcategory will result in a decreased allocation to one or more of the other categories

Citadel Securities LLC (CDRG):  
Alpaca Securities receives revenue from third party liquidity providers based on the order flow execution received at each destination. While rebate rates are substantially similar amongst the liquidity providers they may vary based on order characteristics (such as price of execution, marketability and other characteristics). There is a potential conflict inherent to a market maker such as Citadel both paying for order flow and providing price improvement, as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Alpaca Securities LLC customer orders. Accordingly, from such anticipated profit, a market maker such as Citadel can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Citadel's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one subcategory will result in a decreased allocation to one or more of the other categories.

Jane Street Capital, LLC (JNST):  
Alpaca Securities receives revenue from third party liquidity providers based on the order flow execution received at each destination. While rebate rates are substantially similar amongst the liquidity providers they may vary based on order characteristics (such as price of execution, marketability and other characteristics). There is a potential conflict inherent to a market maker such as Jane Street both paying for order flow and providing price improvement, as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Alpaca Securities LLC customer orders. Accordingly, from such anticipated profit, a market maker such as Jane Street can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Jane Street's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one subcategory will result in a decreased allocation to one or more of the other categories.

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September 2022

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	60.26	10.98	19.71	9.04

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)
Virtu Americas, LLC (NITE)	24.71	22.28	26.60	26.24	35.30	21,637.49	17.6282	5,992.38	22.4355	5,257.26	11.1192	2,492.53	8.5414
Citadel Securities LLC (CDRG)	37.43	36.91	43.39	43.41	20.63	44,465.31	21.8713	7,327.94	16.8191	10,894.51	13.9290	3,084.33	18.0845
Jane Street Capital, LLC (JNST)	37.86	40.81	30	30.35	44.06	40,525.02	18.0273	12,112.94	40.2076	6,307.71	11.5333	10,034.53	27.5526

Material Aspects:

Virtu Americas, LLC (NITE):  
Alpaca Securities receives revenue from third-party liquidity providers based on the order flow execution received at each destination. While rebate rates are substantially similar amongst the liquidity providers they may vary based on order characteristics (such as the price of execution, marketability, and other characteristics). There is a potential conflict of interest to a market maker such as Virtu both paying for order flow and providing price improvement, as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Alpaca Securities LLC customer orders. Accordingly, from such anticipated profit, a market maker such as Virtu can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Virtu's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one subcategory will result in a decreased allocation to one or more of the other categories

Citadel Securities LLC (CDRG):  
Alpaca Securities receives revenue from third party liquidity providers based on the order flow execution received at each destination. While rebate rates are substantially similar amongst the liquidity providers they may vary based on order characteristics (such as price of execution, marketability and other characteristics). There is a potential conflict inherent to a market maker such as Citadel both paying for order flow and providing price improvement, as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Alpaca Securities LLC customer orders. Accordingly, from such anticipated profit, a market maker such as Citadel can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Citadel's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one subcategory will result in a decreased allocation to one or more of the other categories.

Jane Street Capital, LLC (JNST):  
Alpaca Securities receives revenue from third party liquidity providers based on the order flow execution received at each destination. While rebate rates are substantially similar amongst the liquidity providers they may vary based on order characteristics (such as price of execution, marketability and other characteristics). There is a potential conflict inherent to a market maker such as Jane Street both paying for order flow and providing price improvement, as the potential source of funds for each is the same, namely the anticipated profit the market maker seeks to earn from executing or facilitating the execution of Alpaca Securities LLC customer orders. Accordingly, from such anticipated profit, a market maker such as Jane Street can (i) forgo a portion of such anticipated profit to provide price improvement; (ii) forgo a portion of such anticipated profit to pay for order flow; or (iii) retain a larger portion of anticipated profit and not provide (or provide less) price improvement or not provide (or provide less) payment for order flow. A market maker's (such as Jane Street's) anticipated profit must be allocated among these three sub-categories, such that an increased allocation to any one subcategory will result in a decreased allocation to one or more of the other categories.

September 2022

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
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)
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Material Aspects: