William Blair Sell Side - Held NMS Stocks and Options Order Routing Public Report

Non-Directed Orders as Market Orders as Percent of Non-Percent of All Orders 100.00% 98.45% 0.17% 1.33% Non-Marketable Limit Orders 3 Non-Marketable Limit Orders 4 Orders as Percent of Non-Directed 5 Orders 5 Orders 5 Orders 100.00% 1.33% 0.05%

Generation Date: 2023-04-27 15:24:56.930 GMT -0400

Year: 2023 Quarter: 1

January 2023				S&P 500 Stocks									
Summary				301 300 310CK3									
,		Marketable Limit Orders as	Non-Marketable Limit Orders										
	Market Orders as Percent of Non-		as Percent of Non-Directed										
Percent of All Orders	Directed Orders	Orders	Orders	Non-Directed Orders									
100.00%	98.14%	0.30%	1.52%	0.04%									
Venues - Non Directed Orders													
							Not December 2014/December 4	Not December 2014/December 4	Not December Delta/December of	Not December Delta/December d	Not December Delta/December de		Not December 2014/December 2
				Non-Marketable Limit Orders		Net Payment Paid/Received	for Market Orders (cents per	Marketable Limit Orders			Net Payment Paid/Received Non-Marketable Limit Orders	Net Payment Paid/Received	Net Payment Paid/Received Other Orders (cents per
Venue	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	(%)	Other Orders (%)		hundred shares)		(cents per hundred shares)		(cents per hundred shares)	Other Orders (USD)	hundred shares)
Citadel Securities LLC (CDRG)													
	34.52%	34.36%		42.15%	33.33% 0.00%		0.0000	0	0.0000	0	0.0000	0	0.0000
Virtu Americas LLC (NITE)	34.27%	34.24%	37.50%	36.36%	0.00%	0.0000	0.0000	0	0.0000	0	0.0000	0	0.0000
Wall Street Access (VNDM)	31.22%	31.40%	16.67%	21.49%	66.67%	0.0000	0.0000	0	0.0000	0	0.0000	0	0.0000
January 2023				Non-S&P 500 Stocks									
Summary													
New Discostant Outland on 1	Market Orders as Percent of Non-		Non-Marketable Limit Orders as Percent of Non-Directed	Other Orders as Percent of									
Percent of All Orders	Directed Orders	Orders	Orders	Non-Directed Orders									
100.00%	96.68%	0.45%		0.06%									
Venues - Non Directed Orders													
							Net Payment Paid/Received	Net Payment Paid/Received	Net Payment Paid/Received	Net Payment Paid/Received	Net Payment Paid/Received		Net Payment Paid/Received
				Non-Marketable Limit Orders			for Market Orders (cents per	Marketable Limit Orders			Non-Marketable Limit Orders		Other Orders (cents per
Venue	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	(%)	Other Orders (%)	for Market Orders (USD)	hundred shares)	(USD)	(cents per hundred shares)	(USD)	(cents per hundred shares)	Other Orders (USD)	hundred shares)
Citadel Securities LLC (CDRG)	34.60%	34.52%	40.91%	35.14%	83.33%	0.0000	0.0000	0	0.0000	0	0.0000	0	0.0000
Virtu Americas LLC (NITE)	34.05%	33.94%		37.68%	0.00%		0.0000	0	0.0000	0		0	0.0000
Wall Street Access (VNDM)	31.36%	31.54%	20.45%	27.17%	16.67%	0	0.0000	0	0.0000	0	0.0000	0	0.0000
January 2023				Option Contracts									
Summary				Option Contracts									
Julillary		Marketable Limit Orders as	Non-Marketable Limit Orders										
Non-Directed Orders as	Market Orders as Percent of Non-	Percent of Non-Directed	as Percent of Non-Directed	Other Orders as Percent of									
Percent of All Orders	Directed Orders	Orders	Orders	Non-Directed Orders									
100.00%	65.50%	8.26%	25.78%	0.47%									
Venues - Non Directed Orders													
				Non Manhatable Units Onders		Not December 2014/December 4					Net Payment Paid/Received	Not December 0-14/December 4	Net Payment Paid/Received
Venue	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	Non-Marketable Limit Orders (%)	Other Orders (%)		for Market Orders (cents per hundred shares)	Marketable Limit Orders (USD)			Non-Marketable Limit Orders (cents per hundred shares)	Other Orders (USD)	Other Orders (cents per hundred shares)
National Financial Services	Non-Directed Orders (70)	ivial ket Orders (70)	Warketable Ellille Orders (70)	(70)	Other Orders (70)	TOT WATKET OTDETS (03D)	nunureu snares)	(030)	(cents per nunured shares)	(035)	(cents per nunureu snares)	Other Orders (OSD)	nunarea sharesy
LLC (NFSC)	100.00%	100.00%	100.00%	100.00%	100.00%	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Material Aspects:	Note alid not receive necessation	las flass fram CDDC fas thosa t	un dan										
	Blair did not receive payment for ord ir did not receive payment for order												
	r did not receive payment for order												
National Financial Services LLC -	William Blair did not receive payme	ent for order flow from NFSC fo	or these trades										
February 2023				S&P 500 Stocks									
Summary		Markotable Limit Orders	Non-Marketable Limit Orders										
New Piersted Orders of	Market Orders as Percent of Non-		as Percent of Non-Directed	Other Orders or Brown of									

Venues - Non Directed Orders

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Year: 2023 Quarter: 1

				Non-Marketable Limit Orders		Net Payment Paid/Received for		Net Payment Paid/Received Marketable Limit Orders	Net Payment Paid/Received Marketable Limit Orders		Net Payment Paid/Received Non-Marketable Limit Orders	Net Payment Paid/Received	Net Payment Paid/Receive Other Orders (cents pe
/enue	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	(%)	Other Orders (%)	for Market Orders (USD)	hundred shares)	(USD)	(cents per hundred shares)	(USD)	(cents per hundred shares)	Other Orders (USD)	hundred share
itadel Securities LLC (CDRG)	34.01%	33.96%	33.33%	36.52%	75.00%	0	0.0000	0	0.0000	0	0.0000	0	0.00
Vall Street Access (VNDM)	33.34%	33.40%	33.33%	30.43%	0.00%	0	0.0000	0	0.0000	0	0.0000	0	0.00
rirtu Americas LLC (NITE)	32.64%	32.64%	33.33%	33.04%	25.00%	0	0.0000	0	0.0000	0	0.0000	0	0.00
ebruary 2023				Non-S&P 500 Stocks									
ummary		Marketable Limit Orders as	Non-Marketable Limit Orders										
Non-Directed Orders as Mar		Percent of Non-Directed	as Percent of Non-Directed	Other Orders as Percent of									
Percent of All Orders 100.00%	Directed Orders 96.30%	Orders 0.51%	Orders 3.03%	Non-Directed Orders 0.15%									
	30.30%	0.51%	3.03%	0.1378									
nues - Non Directed Orders													
				Non-Marketable Limit Orders		Net Payment Paid/Received for		Net Payment Paid/Received Marketable Limit Orders	Net Payment Paid/Received		Net Payment Paid/Received Non-Marketable Limit Orders	Net Payment Paid/Received	Net Payment Paid/Receiv Other Orders (cents)
'enue	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	(%)	Other Orders (%)	for Market Orders (USD)	hundred shares)	(USD)		(USD)		Other Orders (USD)	hundred share
/irtu Americas LLC (NITE)	33.65%	33.61%	33.33%	35.85%	18.75%	0	0.0000	0	0.0000	0	0.0000	0	0.000
Citadel Securities LLC (CDRG)	33.35%	33.31%	31.48%	33.33%	62.50%	0	0.0000	0	0.0000	0	0.0000	0	0.00
Wall Street Access (VNDM)	33.00%	33.08%	35.19%	30.82%	18.75%	0	0.0000	0	0.0000	0	0.0000	0	0.000
February 2023				Option Contracts									
ummary			Non-Marketable Limit Orders										
			ac Barcant of Man Directed	Other Orders as Percent of									
Non-Directed Orders as Mar		Percent of Non-Directed											
Non-Directed Orders as Mar Percent of All Orders 100.00% Venues - Non Directed Orders	ket Orders as Percent of Non- Directed Orders 61.06%	Percent of Non-Directed Orders 14.49%	Orders 22.70%	Non-Directed Orders 1.76%									
Percent of All Orders 100.00% enues - Non Directed Orders	Directed Orders	Orders 14.49%	Orders 22.70%	Non-Directed Orders	Other Orders (%)	 Net Payment Paid/Received fr for Market Orders (USD)		Net Payment Paid/Received Marketable Limit Orders (USD)		Non-Marketable Limit Orders	Net Payment Paid/Received Non-Marketable Limit Orders (cents per hundred shares)		Other Orders (cents p
Percent of All Orders 100.00% enues - Non Directed Orders enue ational Financial Services	Directed Orders 61.06%	Orders 14.49%	Orders 22.70%	Non-Directed Orders 1.76% Non-Marketable Limit Orders	Other Orders (%) 100.00%	Net Payment Paid/Received for	or Market Orders (cents per	Marketable Limit Orders	Marketable Limit Orders	Non-Marketable Limit Orders	Non-Marketable Limit Orders	Net Payment Paid/Received	Other Orders (cents phundred shar
Percent of All Orders 100.00% enues - Non Directed Orders enue ational Financial Services .C (NFSC) laterial Aspects: tadel Securities LLC - William Blair dic //all Street Access - William Blair dic //all Street Access - William Blair dic	Directed Orders 61.06% Non-Directed Orders (%) 100.00% did not receive payment for order of the contractive payment for order	Orders 14.49% Market Orders (%) 100.00% er flow from CDRG for these trade low from NTE for these trade low from NDM for these trade	Orders 22.70% Marketable Limit Orders (%) 100.00% rades. es. des.	Non-Directed Orders 1.76% Non-Marketable Limit Orders (%)	. ,	Net Payment Paid/Received for Market Orders (USD)	or Market Orders (cents per hundred shares)	Marketable Limit Orders (USD)	Marketable Limit Orders (cents per hundred shares)	Non-Marketable Limit Orders (USD)	Non-Marketable Limit Orders (cents per hundred shares)	Net Payment Paid/Received Other Orders (USD)	Other Orders (cents p hundred share
Percent of All Orders 100.00% Venues - Non Directed Orders Letional Financial Services LC (NFSC) Material Aspects: Ltde de Securities LLC - William Blair did vall Street Access - William Blair did ational Financial Services LLC - Will March 2023	Directed Orders 61.06% Non-Directed Orders (%) 100.00% did not receive payment for order of the contractive payment for order	Orders 14.49% Market Orders (%) 100.00% er flow from CDRG for these trade low from NTE for these trade low from NDM for these trade	Orders 22.70% Marketable Limit Orders (%) 100.00% rades. es. des.	Non-Directed Orders 1.76% Non-Marketable Limit Orders (%)	. ,	Net Payment Paid/Received for Market Orders (USD)	or Market Orders (cents per hundred shares)	Marketable Limit Orders (USD)	Marketable Limit Orders (cents per hundred shares)	Non-Marketable Limit Orders (USD)	Non-Marketable Limit Orders (cents per hundred shares)	Net Payment Paid/Received Other Orders (USD)	Other Orders (cents p
Percent of All Orders 100.00% Venues - Non Directed Orders Venue lational Financial Services LC (NFSC) Waterial Aspects: 'itade! Securities LLC - William Blair did Wall Street Access - William Blair did validational Financial Services LLC - Will Warch 2023	Directed Orders 61.06% Non-Directed Orders (%) 100.00% did not receive payment for order of the contractive payment for order	Orders 14.49% Market Orders (%) 100.00% er flow from CDRG for these trailow from NITE for these trade low from VNDM for these trails to order flow from NFSC fo	Orders 22.70% Marketable Limit Orders (%) 100.00% rades. es. des.	Non-Directed Orders 1.76% Non-Marketable Limit Orders (%) 100.00%	. ,	Net Payment Paid/Received for Market Orders (USD)	or Market Orders (cents per hundred shares)	Marketable Limit Orders (USD)	Marketable Limit Orders (cents per hundred shares)	Non-Marketable Limit Orders (USD)	Non-Marketable Limit Orders (cents per hundred shares)	Net Payment Paid/Received Other Orders (USD)	Other Orders (cents p hundred share
Percent of All Orders 100.00% Venues - Non Directed Orders Venue lational Financial Services LC (NFSC) Material Aspects: litadel Securities LLC - William Blair di virtu Americas LLC - William Blair di vall Street Access - William Blair di vall Street Acces	Directed Orders 61.06% Non-Directed Orders (%) 100.00% did not receive payment for order of not receive payment for order of the orde	Orders 14.49% Market Orders (%) 100.00% er flow from CDRG for these trade low from NITE for these trade low from NDM for these trade t for order flow from NFSC fo Marketable Limit Orders as Percent of Non-Directed	Orders 22.70% Marketable Limit Orders (%) 100.00% rades. es. des. or these trades Non-Marketable Limit Orders as Percent of Non-Directed	Non-Directed Orders 1.76% Non-Marketable Limit Orders (%) 100.00% S&P 500 Stocks Other Orders as Percent of	. ,	Net Payment Paid/Received for Market Orders (USD)	or Market Orders (cents per hundred shares)	Marketable Limit Orders (USD)	Marketable Limit Orders (cents per hundred shares)	Non-Marketable Limit Orders (USD)	Non-Marketable Limit Orders (cents per hundred shares)	Net Payment Paid/Received Other Orders (USD)	Net Payment Paid/Receive Other Orders (cents p hundred share 0.000
Percent of All Orders 100.00% enues - Non Directed Orders enue ational Financial Services LC (NFSC) Itadei Securities LLC - William Blair did atloral Street Access - William Blair did atlonal Financial Services LLC - Will Aracch 2023 ummary Non-Directed Orders as Mar Percent of All Orders	Non-Directed Orders (%) Non-Directed Orders (%) 100.00% did not receive payment for order of the contractive payment for order for the payment for order for the contractive payment for order for the contractive payment for order for the payment for orders as Percent of Non-Directed Orders	Orders 14.49% Market Orders (%) 100.00% er flow from CDRG for these trade low from NTE for these trade low from NDM for these trade low from NFSC fo Marketable Limit Orders as Percent of Non-Directed Orders	Orders 22.70% Marketable Limit Orders (%) 100.00% rades. es. des. or these trades Non-Marketable Limit Orders as Percent of Non-Directed Orders	Non-Directed Orders 1.76% Non-Marketable Limit Orders (%) 100.00% S&P 500 Stocks Other Orders as Percent of Non-Directed Orders	. ,	Net Payment Paid/Received for Market Orders (USD)	or Market Orders (cents per hundred shares)	Marketable Limit Orders (USD)	Marketable Limit Orders (cents per hundred shares)	Non-Marketable Limit Orders (USD)	Non-Marketable Limit Orders (cents per hundred shares)	Net Payment Paid/Received Other Orders (USD)	Other Orders (cents p
Percent of All Orders 100.00% enues - Non Directed Orders enue ational Financial Services LC (NFSC) flaterial Aspects: ttadel Securities LLC - William Blair irtu Americas LLC - William Blair did ational Financial Services LLC - Will March 2023 ummary Non-Directed Orders as Mar Percent of All Orders 100.00%	Directed Orders 61.06% Non-Directed Orders (%) 100.00% did not receive payment for order of not receive payment for order of the orde	Orders 14.49% Market Orders (%) 100.00% er flow from CDRG for these trade low from NITE for these trade low from NDM for these trade t for order flow from NFSC fo Marketable Limit Orders as Percent of Non-Directed	Orders 22.70% Marketable Limit Orders (%) 100.00% rades. es. des. or these trades Non-Marketable Limit Orders as Percent of Non-Directed	Non-Directed Orders 1.76% Non-Marketable Limit Orders (%) 100.00% S&P 500 Stocks Other Orders as Percent of	. ,	Net Payment Paid/Received for Market Orders (USD)	or Market Orders (cents per hundred shares)	Marketable Limit Orders (USD)	Marketable Limit Orders (cents per hundred shares)	Non-Marketable Limit Orders (USD)	Non-Marketable Limit Orders (cents per hundred shares)	Net Payment Paid/Received Other Orders (USD)	Other Orders (cents phundred shar
Percent of All Orders 100.00% /enues - Non Directed Orders /enue	Non-Directed Orders (%) Non-Directed Orders (%) 100.00% did not receive payment for order of the contractive payment for order for the payment for order for the contractive payment for order for the contractive payment for order for the payment for orders as Percent of Non-Directed Orders	Orders 14.49% Market Orders (%) 100.00% er flow from CDRG for these trade low from NTE for these trade low from NDM for these trade low from NFSC fo Marketable Limit Orders as Percent of Non-Directed Orders	Orders 22.70% Marketable Limit Orders (%) 100.00% rades. es. des. or these trades Non-Marketable Limit Orders as Percent of Non-Directed Orders	Non-Directed Orders 1.76% Non-Marketable Limit Orders (%) 100.00% S&P 500 Stocks Other Orders as Percent of Non-Directed Orders	. ,	Net Payment Paid/Received for Market Orders (USD) 0	or Market Orders (cents per hundred shares) 0.0000	Marketable Limit Orders (USD) 0	Marketable Limit Orders (cents per hundred shares) 0.0000	Non-Marketable Limit Orders (USD) 0	Non-Marketable Limit Orders (cents per hundred shares) 0.0000	Net Payment Paid/Received Other Orders (USD)	Other Orders (cents) hundred shar 0.00
Percent of All Orders 100.00% enues - Non Directed Orders enue attional Financial Services C (NFSC) laterial Aspects: tadel Securities LLC - William Blair cit attu Americas LLC - William Blair did attional Financial Services LLC - Will farch 2023 Jummary Non-Directed Orders as Mar Percent of All Orders 100.00% enues - Non Directed Orders	Non-Directed Orders (%) Non-Directed Orders (%) 100.00% did not receive payment for order of the control of	Market Orders (%) 100.00% er flow from CDRG for these trade low from NITE for these trade low from NNFO for these trade to for order flow from NFSC fo Marketable Limit Orders as Percent of Non-Directed Orders 0.31%	Orders 22.70% Marketable Limit Orders (%) 100.00% rades. es. des. or these trades Non-Marketable Limit Orders as Percent of Non-Directed Orders 2.21%	Non-Directed Orders 1.76% Non-Marketable Limit Orders (%) 100.00% S&P 500 Stocks Other Orders as Percent of Non-Directed Orders 0.74%	100.00%	Net Payment Paid/Received for Market Orders (USD) 0 0 Net Payment Paid/Received for Market Orders (USD)	or Market Orders (cents per hundred shares) 0.0000 0.0000 Net Payment Paid/Received or Market Orders (cents per	Marketable Limit Orders (USD) 0 Net Payment Paid/Received Marketable Limit Orders	Marketable Limit Orders (cents per hundred shares) 0.0000 Net Payment Paid/Received Marketable Limit Orders	Non-Marketable Limit Orders (USD) 0 Net Payment Paid/Received Non-Marketable Limit Orders	Non-Marketable Limit Orders (cents per hundred shares) 0.0000 Net Payment Paid/Received Non-Marketable Limit Orders	Net Payment Paid/Received Other Orders (USD) 0 Net Payment Paid/Received	Other Orders (cents ; hundred shar 0.00
Percent of All Orders 100.00% enues - Non Directed Orders enue ational Financial Services LC (NFSC) Material Aspects: Itadel Securities LLC - William Blair citu tha Mareiras LLC - William Blair did ational Financial Services LLC - Will March 2023 ummary Non-Directed Orders as Mar Percent of All Orders 100.00% enues - Non Directed Orders	Non-Directed Orders (%) Non-Directed Orders (%) 100.00% did not receive payment for order of the contractive payment for order for the payment for order for the contractive payment for order for the contractive payment for order for the payment for orders as Percent of Non-Directed Orders	Market Orders (%) 100.00% er flow from CDRG for these trade low from NITE for these trade low from NNFO for these trade to for order flow from NFSC fo Marketable Limit Orders as Percent of Non-Directed Orders 0.31%	Orders 22.70% Marketable Limit Orders (%) 100.00% rades. es. des. or these trades Non-Marketable Limit Orders as Percent of Non-Directed Orders 2.21%	Non-Directed Orders 1.76% Non-Marketable Limit Orders (%) 100.00% S&P 500 Stocks Other Orders as Percent of Non-Directed Orders 0.74%	. ,	Net Payment Paid/Received for Market Orders (USD) 0	or Market Orders (cents per hundred shares) 0.0000	Marketable Limit Orders (USD) 0 Net Payment Paid/Received	Marketable Limit Orders (cents per hundred shares) 0.0000 Net Payment Paid/Received Marketable Limit Orders	Non-Marketable Limit Orders (USD) 0 Net Payment Paid/Received Non-Marketable Limit Orders	Non-Marketable Limit Orders (cents per hundred shares) 0.0000 Net Payment Paid/Received	Net Payment Paid/Received Other Orders (USD)	Other Orders (cents phundred share 0.00
Percent of All Orders 100.00% Venues - Non Directed Orders Venue lational Financial Services LC (NFSC) Material Aspects: ittadel Securities LLC - William Blair did lational Financial Services LLC - Will March 2023 ummary Non-Directed Orders as Mar Percent of All Orders 100.00% Venues - Non Directed Orders	Non-Directed Orders (%) Non-Directed Orders (%) 100.00% did not receive payment for order of the control of	Market Orders (%) 100.00% er flow from CDRG for these trade low from NITE for these trade low from NNFO for these trade to for order flow from NFSC fo Marketable Limit Orders as Percent of Non-Directed Orders 0.31%	Orders 22.70% Marketable Limit Orders (%) 100.00% rades. es. des. or these trades Non-Marketable Limit Orders as Percent of Non-Directed Orders 2.21%	Non-Directed Orders 1.76% Non-Marketable Limit Orders (%) 100.00% S&P 500 Stocks Other Orders as Percent of Non-Directed Orders 0.74%	100.00%	Net Payment Paid/Received for Market Orders (USD) 0 0 Net Payment Paid/Received for Market Orders (USD)	or Market Orders (cents per hundred shares) 0.0000 0.0000 Net Payment Paid/Received or Market Orders (cents per	Marketable Limit Orders (USD) 0 Net Payment Paid/Received Marketable Limit Orders	Marketable Limit Orders (cents per hundred shares) 0.0000 Net Payment Paid/Received Marketable Limit Orders	Non-Marketable Limit Orders (USD) 0 Net Payment Paid/Received Non-Marketable Limit Orders	Non-Marketable Limit Orders (cents per hundred shares) 0.0000 Net Payment Paid/Received Non-Marketable Limit Orders	Net Payment Paid/Received Other Orders (USD) 0 Net Payment Paid/Received	Other Orders (cents p hundred share
Percent of All Orders 100.00% Yenues - Non Directed Orders Yenues - Non Directed Orders Yenue - All Orders Yenue - Non Directed Orders Yenue - Non Directed Orders	Non-Directed Orders (%) Non-Directed Orders (%) 100.00% did not receive payment for order of the contractive payment for orders as Percent of Non-Directed Orders 96.74% Non-Directed Orders (%)	Market Orders (%) 100.00% Per flow from CDRG for these trade flow from NITE for these trade flow from NNDM for these trade flow from NNDM for these trade for order flow from NFSC for Marketable Limit Orders as Percent of Non-Directed Orders 0.31% Market Orders (%)	Orders 22.70% Marketable Limit Orders (%) 100.00% rades. es. des. or these trades Non-Marketable Limit Orders as Percent of Non-Directed Orders 2.21% Marketable Limit Orders (%)	Non-Directed Orders 1.76% Non-Marketable Limit Orders (%) 100.00% S&P 500 Stocks Other Orders as Percent of Non-Directed Orders 0.74% Non-Marketable Limit Orders (%)	100.00%	Net Payment Paid/Received for Market Orders (USD) 0 Net Payment Paid/Received for Market Orders (USD)	or Market Orders (cents per hundred shares) 0.0000 Net Payment Paid/Received or Market Orders (cents per hundred shares)	Marketable Limit Orders (USD) 0 Net Payment Paid/Received Marketable Limit Orders	Marketable Limit Orders (cents per hundred shares) 0.0000 Net Payment Paid/Received Marketable Limit Orders (cents per hundred shares)	Non-Marketable Limit Orders (USD) 0 Net Payment Paid/Received Non-Marketable Limit Orders (USD)	Non-Marketable Limit Orders (cents per hundred shares) 0.0000 Net Payment Paid/Received Non-Marketable Limit Orders (cents per hundred shares)	Net Payment Paid/Received Other Orders (USD) 0 Net Payment Paid/Received Other Orders (USD)	Other Orders (cents phundred share 0.00 Net Payment Paid/Receiv Other Orders (cents phundred share)

March 2023

Non-S&P 500 Stocks

William Blair Sell Side - Held NMS Stocks and Options Order Routing Public Report

Generation Date: 2023-04-27 15:24:56.930 GMT -0400

Year: 2023	Quarter: :
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		Marketable Limit Orders as	Non-Marketable Limit Orders	
Non-Directed Orders as	Market Orders as Percent of Non-	Percent of Non-Directed	as Percent of Non-Directed	Other Orders as Percent of
Percent of All Orders	Directed Orders	Orders	Orders	Non-Directed Orders
100.00%	93.99%	1.52%	4.29%	0.21%

Venues - Non Directed Orders

				Non-Marketable Limit Orders		Net Payment Paid/Received	for Market Orders (cents per	Marketable Limit Orders	Marketable Limit Orders	Net Payment Paid/Received Non-Marketable Limit Orders	Non-Marketable Limit Orders	Net Payment Paid/Received	Net Payment Paid/Received Other Orders (cents per
Venue	Non-Directed Orders (%)	Market Orders (%)	Marketable Limit Orders (%)	(%)	Other Orders (%)	for Market Orders (USD)	hundred shares)	(USD)	(cents per hundred shares)	(USD)	(cents per hundred shares)	Other Orders (USD)	hundred shares)
Citadel Securities LLC (CDRG)	34.56%	33.93%	6 54.40%	40.68%	47.06%	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Wall Street Access (VNDM)	33.48%	33.74%	6 20.00%	32.49%	35.29%	0	0.0000	0	0.0000	0	0.0000	0	0.0000
Virtu Americas LLC (NITE)	31.96%	32.33%	6 25.60%	26.84%	17.65%	0	0.0000	0	0.0000	0	0.0000	0	0.0000
March 2023				Option Contracts									

Summary

Marketable Limit Orders as Non-Marketable Limit Orders

Marketable Limit Orders as Non-Marketable Limit Orders

Non-Directed Orders as Market Orders as Percent of Non-Directed

Percent of Non-Directed as Percent of Non-Directed orders

Percent of Non-Directed orders

Orders Orders

100.00% 63.47% 9.43% 23.39% 3.71%

Venues - Non Directed Orders

							Net Payment Paid/Received	Net Payment Paid/Received	Net Payment Paid/Received	Net Payment Paid/Received	Net Payment Paid/Received		Net Payment Paid/Received
			N	on-Marketable Limit Orders		Net Payment Paid/Received	for Market Orders (cents per	Marketable Limit Orders	Marketable Limit Orders	Non-Marketable Limit Orders	Non-Marketable Limit Orders	Net Payment Paid/Received	Other Orders (cents per
Venue	Non-Directed Orders (%)	Market Orders (%) Marketable Li	mit Orders (%)	(%)	Other Orders (%)	for Market Orders (USD)	hundred shares)	(USD)	(cents per hundred shares)	(USD)	(cents per hundred shares)	Other Orders (USD)	hundred shares)
National Financial Services													
LLC (NFSC)	100.00%	100.00%	100.00%	100.00%	100.00%	0	0.0000	0	0.0000	. 0	0.0000	0	0.0000

Material Aspects:

Citadel Securities LLC - William Blair did not receive payment for order flow from CDRG for these trades.

Virtu Americas LLC - William Blair did not receive payment for order flow from NITE for these trades. Wall Street Access - William Blair did not receive payment for order flow from VNDM for these trades.

National Financial Services LLC - William Blair did not receive payment for order flow from NFSC for these trades