				T		T.	ı			1	1							
Hightower																		
Securities does not						HIGHTOWER SECURITIES, LLC - Held NMS												
receive payment for						Stocks and Options Order Routing Public												
order flow. October 2021	4th Quarter, 2021					Report												
S&P 500 Stocks																		
Summary					Marketable Limit		Non-Marketable											
	Non-Directed		Market Orders as %		Orders as % of		Limit Orders as %		Other Orders as %									
Total Non-Directed	Orders as % of All	Total Market	of Non-Directed	Total Marketable	Non-Directed		of Non-Directed	Total Other	of Non-Directed									
Orders	Orders 100.00	Orders 35	Orders 89.74	Limit Orders	Orders 0.00	Total Non-Marketable Limit Orders	Orders 10.26	Orders	Orders 0.00									
39	100.00	35	89.74	0	0.00	4	10.26	U	0.00									
Venues																		
											Net Payment	Net Payment Paid/Received for	Net Payment	Net Payment Paid/Received for	Net Payment	Net Payment Paid/Received for		Net Payment Paid/Received for
											Paid/Received for	Market	Paid/Received for	Marketable Limit	Paid/Received for	Non-Marketable	Net Payment	Other Orders(cents
Venue - Non-	Non-Directed	Non-Directed			Marketable Limit		Non-Marketable	Non-Marketable			Market	Orders(cents per	Marketable Limit	Orders(cents per	Non-Marketable	Limit Orders(cents	Paid/Received for	per hundred
directed Order Flow Citadel Securities	Orders	Orders(%)	Market Orders	Market Orders(%)	Orders	Marketable Limit Orders(%)	Limit Orders	Limit Orders(%)	Other Orders	Other Orders(%)	Orders(USD)	hundred shares)	Orders(USD)	hundred shares)	Limit Orders(USD)	per hundred shares)	Other Orders(USD)	shares)
LLC(CDRG)	24	60.00	23	65.71	١ .	0.00	1	20.00		0.00					١ .		، ا	ا ا
VIRTU Americas,									-						T T			
LLC(NITE)	9	22.50	6	17.14	0	0.00	3	60.00	0	0.00	0	0	0	0	0	0	0	0
JANE STREET																		
CAPITAL, LLC(JNST)	4	10.00	4	11.43	0	0.00	0	0.00	0	0.00	0	0	0	0	0	0	ه ا	0
1																		
NASDAQ Execution											1							
Services, LLC(NSDQ)	1	2.50	0	0.00	0	0.00	1	20.00		0.00		0	0		0	0	ه ا	ه ا
Two Sigma																		
Securities,		2.50		2.86		0.00				0.00	.				_	_	] .	
LLC(SOHO) UBS Securities,	1	2.50	1	2.86	+ · · · °	0.00	•	0.00	- °	0.00	+ °	1	- °	- °	- °	- 0	<del>'  °</del>	•
LLC(UBSS)	1	2.50	1	2.86	0	0.00	0	0.00	0	0.00	0	0	0	0	0	0	0	0
October 2021																		
OCCUBET EVEL																		
Non-S&P 500 Stocks Summary																		
Sullillary					Marketable Limit		Non-Marketable											
	Non-Directed		Market Orders as %		Orders as % of		Limit Orders as %		Other Orders as %									
Total Non-Directed	Orders as % of All	Total Market	of Non-Directed	Total Marketable	Non-Directed		of Non-Directed	Total Other	of Non-Directed									
		l	l = .															
Orders	Orders 100.00	Orders 49	Orders 76.56	Limit Orders	Orders 3.13	Total Non-Marketable Limit Orders	Orders 7.81	Orders 8	Orders 12.50									
	Orders 100.00	Orders 49			Orders 3.13	Total Non-Marketable Limit Orders 5	Orders 7.81		Orders 12.50									
Orders						Total Non-Marketable Limit Orders 5												
Orders 64						Total Non-Marketable Limit Orders 5						Net Payment		Net Payment		Net Payment		Net Payment
Orders 64						Total Non-Marketable Limit Orders 5					Net Payment	Net Payment Paid/Received for	Net Payment	Net Payment Paid/Received for	Net Payment	Net Payment Paid/Received for		Net Payment Paid/Received for
Orders 64 Venues	100.00	49			3.13	Total Non-Marketable Limit Orders 5	7.81	8			Paid/Received for	Paid/Received for Market	Paid/Received for	Paid/Received for Marketable Limit	Paid/Received for	Paid/Received for Non-Marketable	Net Payment	Paid/Received for Other Orders(cents
Orders 64 Venues Venue - Non-	100.00  Non-Directed	A9 Non-Directed	76.56	2	3.13  Marketable Limit	5	7.81	Non-Marketable	12.50	Other Orders(%)	Paid/Received for Market	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders 64 Venues	100.00  Non-Directed	49	76.56		3.13  Marketable Limit	Total Non-Marketable Limit Orders  5  Marketable Limit Orders(%)	7.81	Non-Marketable		Other Orders(%)	Paid/Received for	Paid/Received for Market	Paid/Received for	Paid/Received for Marketable Limit	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders 64 Venues  Venue - Non- directed Order Flow Citadel Securities LLC(CDRG)	100.00  Non-Directed	A9 Non-Directed	76.56	2	3.13  Marketable Limit	5	7.81 Non-Marketable Limit Orders	Non-Marketable	12.50	Other Orders(%)	Paid/Received for Market	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venues  Venue - Non- directed Order Flow Citadel Securities LLC(CDRG) VIRTU Americas,	Non-Directed Orders	Non-Directed Orders(%)	76.56  Market Orders  25	Market Orders(%)	3.13  Marketable Limit Orders	Marketable Limit Orders(%)	7.81 Non-Marketable Limit Orders	Non-Marketable Limit Orders(%)	12.50	0.00	Paid/Received for Market	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venue - Non- directed Order Flow Citadel Securities LLC(CNRG) VIRTU Americas, LLC(NITE)	100.00  Non-Directed	Non-Directed Orders(%)	76.56	Market Orders(%)	3.13  Marketable Limit Orders	S  Marketable Limit Orders (%)	7.81 Non-Marketable Limit Orders	Non-Marketable Limit Orders(%)	12.50		Paid/Received for Market	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders 64  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(DRG) WIRTU Americas, LLC(INITE) JANE STREET	Non-Directed Orders	Non-Directed Orders(%) 43.08 27.69	76.56  Market Orders  25	Market Orders(%) 51.02 24.49	3.13  Marketable Limit Orders	Marketable Limit Orders(%)  50.00	7.81 Non-Marketable Limit Orders	Non-Marketable Limit Orders(%) 33.33	12.50	0.00 62.50	Paid/Received for Market	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  64  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(CIORG) UIRTU Americas, LLC(NITE) JANE STREET CAPITAL, LLC(JNST)	Non-Directed Orders	Non-Directed Orders(%)	76.56  Market Orders  25	Market Orders(%) 51.02 24.49	3.13  Marketable Limit Orders	Marketable Limit Orders(%)	7.81 Non-Marketable Limit Orders	Non-Marketable Limit Orders(%)	12.50	0.00	Paid/Received for Market	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  64  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(DRG) VIRTU Americas, LLC(NITE) JANE STREET CAPITAL, LLC(JNST) Choe EDGX US Equities	Non-Directed Orders	Non-Directed Orders(%) 43.08 27.69	76.56  Market Orders  25  12	Market Orders(%) 51.02 24.49	Marketable Limit Orders  1 1 0	Marketable Limit Orders(%)	Non-Marketable Limit Orders	Non-Marketable Limit Orders(%) 33.33 0.00	Other Orders	0.00 62.50 0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  64  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(DRG) VIRTU Americas, LLC(INTE)  JANE STREET CAPITAL, LLC(JNST) Cobe EDGX US Equities Exchange(EDGX)	Non-Directed Orders	Non-Directed Orders(%) 43.08 27.69	76.56  Market Orders  25  12	Market Orders(%) 51.02 24.49	Marketable Limit Orders  1 1 0	Marketable Limit Orders(%)  50.00	Non-Marketable Limit Orders	Non-Marketable Limit Orders(%) 33.33	Other Orders	0.00 62.50	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  54  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(DIRG) VIRTU Americas, LLC(NITE) JANE STREET CAPITAL, LLC(JINST) Choe EDGX US Exchange(EDGX) USS Securities,	Non-Directed Orders	Non-Directed Orders(%) 43.08 27.69 15.38	76.56  Market Orders  25  12	Market Orders(%) 51.02 24.49 20.41	Marketable Limit Orders	Marketable Limit Orders(%)	Non-Marketable Limit Orders	Non-Marketable Limit Orders(%) 33.33 0.00	Other Orders	0.00 62.50 0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  64  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(DRG) VIRTU Americas, LLC(INTE)  JANE STREET CAPITAL, LLC(JNST) Cobe EDGX US Equities Exchange(EDGX)	Non-Directed Orders	Non-Directed Orders(%) 43.08 27.69	76.56  Market Orders  25  12	Market Orders(%) 51.02 24.49	Marketable Limit Orders	Marketable Limit Orders(%)	Non-Marketable Limit Orders	Non-Marketable Limit Orders(%) 33.33 0.00	Other Orders	0.00 62.50 0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  54  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(LORG) VIRTU Americas, LLC(NTS)  JANE STREET CAPITAL, LLC(NST) Cobe E DOSK US Equities Exchange (EOSK) UBS Securities, LLC(UBSS) Two Sigma Securities,	Non-Directed Orders	Non-Directed Orders(%) 43.08 27.69 15.38 4.62	76.56  Market Orders  25  12	Market Orders(%) 51.02 24.49 20.41 0.00	Marketable Limit Orders	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00	Non-Marketable Limit Orders	Non-Marketable Limit Orders(%) 33.33 0.00 50.00	Other Orders	0.00 62.50 0.00 0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  54  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(CING) VIRTU Americas, LLC(NITE) JANE STREET CAPITAL, LLC(INST) Choe EDGX US Exchange(EDGX) LUS Securities, LLC(UISS) Two Sigma	Non-Directed Orders	Non-Directed Orders(%) 43.08 27.69 15.38	76.56  Market Orders  25  12	Market Orders(%) 51.02 24.49 20.41	Marketable Limit Orders	Marketable Limit Orders(%)	Non-Marketable Limit Orders	Non-Marketable Limit Orders(%) 33.33 0.00	Other Orders	0.00 62.50 0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  54  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(LORG) VIRTU Americas, LLC(NTS)  JANE STREET CAPITAL, LLC(NST) Cobe E DOSK US Equities Exchange (EOSK) UBS Securities, LLC(UBSS) Two Sigma Securities,	Non-Directed Orders	Non-Directed Orders(%) 43.08 27.69 15.38 4.62	76.56  Market Orders  25  12	Market Orders(%) 51.02 24.49 20.41 0.00	Marketable Limit Orders	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00	Non-Marketable Limit Orders	Non-Marketable Limit Orders(%) 33.33 0.00 50.00	Other Orders	0.00 62.50 0.00 0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(LCRG) VIRTU Americas, LLC(NTS)  JANE STREET CAPITAL, LLC(JNST) Clobe EDGX US Equities Exchange (EDGX) UBS Securities, LLC(USSS) Two Sigma Securities, LLC(SOHO)  NASDAQ Execution	Non-Directed Orders	Non-Directed Orders(%) 43.08 27.69 15.38 4.62 4.62	76.56  Market Orders  25  12	Market Orders(%) 51.02 24.49 20.41 0.00 0.00	Marketable Limit Orders	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00	Non-Marketable Limit Orders	Non-Marketable   Limit Orders(%)   33.33   0.00   0.00     0.00	Other Orders	0.00 62.50 0.00 0.00 37.50	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  54  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(CMG) VIRTU Americas, LLC(NITE) JANE STREET CAPITAL, LLC(INST) Choe EDGX US Exchange(EDGX) LLC(SSS) Two Sigma Securities, LLC(SOHO)	Non-Directed Orders	Non-Directed Orders(%) 43.08 27.69 15.38 4.62	76.56  Market Orders  25  12	Market Orders(%) 51.02 24.49 20.41 0.00	Marketable Limit Orders	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00	Non-Marketable Limit Orders	Non-Marketable Limit Orders(%) 33.33 0.00 50.00	Other Orders	0.00 62.50 0.00 0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(LCRG) VIRTU Americas, LLC(NTS)  JANE STREET CAPITAL, LLC(JNST) Clobe EDGX US Equities Exchange (EDGX) UBS Securities, LLC(USSS) Two Sigma Securities, LLC(SOHO)  NASDAQ Execution	Non-Directed Orders	Non-Directed Orders(%) 43.08 27.69 15.38 4.62 4.62	76.56  Market Orders  25  12	Market Orders(%) 51.02 24.49 20.41 0.00 0.00	Marketable Limit Orders	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00	Non-Marketable Limit Orders	Non-Marketable   Limit Orders(%)   33.33   0.00   0.00     0.00	Other Orders	0.00 62.50 0.00 0.00 37.50	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(LCRG) VIRTU Americas, LLC(NTS)  JANE STREET CAPITAL, LLC(JNST) Clobe EDGX US Equities Exchange (EDGX) UBS Securities, LLC(USSS) Two Sigma Securities, LLC(SOHO)  NASDAQ Execution	Non-Directed Orders	Non-Directed Orders(%) 43.08 27.69 15.38 4.62 4.62	76.56  Market Orders  25  12	Market Orders(%) 51.02 24.49 20.41 0.00 0.00	Marketable Limit Orders	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00	Non-Marketable Limit Orders	Non-Marketable   Limit Orders(%)   33.33   0.00   0.00     0.00	Other Orders  0 5	0.00 62.50 0.00 0.00 37.50	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(CMG) VIRTU Americas, LLC(NTS) ANE STREET CAPITAL, LLC(INST) Choe EDGX US Exchange(EDGX) LLC(SOHO) NASDAQ Execution Services, LLC(NSDQ) October 2021	Non-Directed Orders	Non-Directed Orders(%) 43.08 27.69 15.38 4.62 4.62	76.56  Market Orders  25  12	Market Orders(%) 51.02 24.49 20.41 0.00 0.00	Marketable Limit Orders	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00	Non-Marketable Limit Orders	Non-Marketable   Limit Orders(%)   33.33   0.00   0.00     0.00	Other Orders  0 5	0.00 62.50 0.00 0.00 37.50	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(DRG) VIRTU Americas, LLC(NITE)  JANE STREET CAPITAL, LLC(JINST) Choe EDGX US Equities Exchange(EDGX) LLC(SOHO)  NASDAQ Execution Securities, LLC(SOHO)  NASDAQ Execution Services, LLC(NSDQ)  October 2021  Option Contracts	Non-Directed Orders	Non-Directed Orders(%) 43.08 27.69 15.38 4.62 4.62	76.56  Market Orders  25  12	Market Orders(%) 51.02 24.49 20.41 0.00 0.00	Marketable Limit Orders	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00	Non-Marketable Limit Orders	Non-Marketable   Limit Orders(%)   33.33   0.00   0.00     0.00	Other Orders  0 5	0.00 62.50 0.00 0.00 37.50	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(CMG) VIRTU Americas, LLC(NTS) ANE STREET CAPITAL, LLC(INST) Choe EDGX US Exchange(EDGX) LLC(SOHO) NASDAQ Execution Services, LLC(NSDQ) October 2021	100.00  Non-Directed Orders  28  18  10  3  3  1	Non-Directed Orders(%) 43.08 27.69 15.38 4.62 4.62	76.56  Market Orders  25  12  10  0  0	Market Orders(%) 51.02 24.49 20.41 0.00 0.00	Marketable Limit Orders  1 1 0 0 0 0 Marketable Limit Corders	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00	Non-Marketable Limit Orders  2 0 0 3 0 1	Non-Marketable   Limit Orders(%)   33.33   0.00   0.00     0.00	Other Orders	0.00 62.50 0.00 0.00 37.50	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(CDRG) VIRTU Americas, LLC(NTS) ANE STREET CAPITAL, LLC(INST) Choe EDGX US Exchange(EDGX) LLC(SSS) Two Sigma Securities, LLC(SOHO)  NASDAQ Execution Services, LLC(NSDQ) October 2021 Option Contracts Summary	Non-Directed Orders  28  18  10  3  3  1	Non-Directed   Orders(%)   43.08   27.69   15.38   4.62   4.62   3.08   1.54	76.56  Market Orders  25  12  10  0  0  Market Orders as %	Market Orders(%) 51.02 24.49 20.41 0.00 4.08	Marketable Limit Orders  1  1  0  0  0  Marketable Limit Orders s  6  0  0  0  0  0  0  0  0  0  0  0  0	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00	Non-Marketable Limit Orders  2 0 0 0 1 1 Non-Marketable Limit Orders as %	Non-Marketable Limit Orders(%)   33.33   0.00   0.00   50.00   0.00   16.67	Other Orders  Other Orders  O  O  O  O  O  O  O  O  O  O  O  O  O	0.00 62.50 0.00 0.00 37.50	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(DRG) VIRTU Americas, LLC(NITE) JANE STREET CAPITAL, LLC(JNST) Choe EDGX US Exchange(EDGX) USS Securities, LLC(SUSS) LLC(SUSS) LLC(SUSS) LLC(SUSS) Securities, LLC(SUSS) Control of the Contro	Non-Directed Orders 28 18 10 3 3 3 2 1 1 Non-Directed Orders 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Non-Directed Orders(K)  43.08  27.69  15.38  4.62  4.62  3.08  1.54	Market Orders  25 12 10 0 0 0 Market Orders as % of Non-Directed	Market Orders(%) 51.02 24.49 20.41 0.00 0.00 4.08 Total Marketable	Marketable Limit Orders  1 1 0 0 0 Marketable Limit Orders as % of Non-Directed	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00  0.00	Non-Marketable Limit Orders  2 0 0 1 Non-Marketable Limit Orders s % of Non-Directs s % of Non-Directs s %	Non-Marketable Limit Orders(%)   33.33   0.000   0.000   0.000   0.000   0.000   0.000   16.67	Other Orders  O  O  O  O  O  O  O  O  O  O  O  O  O	0.00 62.50 0.00 0.00 37.50	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(CDRG) VIRTU Americas, LLC(NTS) ANE STREET CAPITAL, LLC(INST) Choe EDGX US Exchange(EDGX) LLC(SSS) Two Sigma Securities, LLC(SOHO)  NASDAQ Execution Services, LLC(NSDQ) October 2021 Option Contracts Summary	Non-Directed Orders  28  18  10  3  3  1	Non-Directed   Orders(%)   43.08   27.69   15.38   4.62   4.62   3.08   1.54	76.56  Market Orders  25  12  10  0  0  Market Orders as %	Market Orders(%)	Marketable Limit Orders  1  1  0  0  0  Marketable Limit Orders s  6  0  0  0  0  0  0  0  0  0  0  0  0	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00	Non-Marketable Limit Orders  2 0 0 0 1 1 Non-Marketable Limit Orders as %	Non-Marketable Limit Orders(%)   33.33   0.00   0.00   50.00   0.00   16.67	Other Orders  Other Orders  O  O  O  O  O  O  O  O  O  O  O  O  O	0.00 62.50 0.00 0.00 37.50	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  54  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(CIORG) VIRTU Americas, LLC(INTE) LLC(INT	Non-Directed Orders  28 18 10 3 3 4 Von-Directed Orders as % of All Orders as % of All	Non-Directed Orders(K)  43.08  27.69  15.38  4.62  4.62  3.08  1.54	Market Orders  25 12 10 0 0 Market Orders as % of Non-Directed Orders	Market Orders(%)	Marketable Limit Orders  1  1  0  0  0  Marketable Limit Orders s  6  0  0  0  0  0  0  0  0  0  0  0  0	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00  0.00	Non-Marketable Limit Orders  2 0 0 1 Non-Marketable Limit Orders as % of Non-Directed Orders as % of Non-Directed	Non-Marketable Limit Orders(%)   33.33   0.000   0.000   0.000   0.000   0.000   0.000   16.67	Other Orders  Other Orders as % of Non-Directed Orders	0.00 62.50 0.00 0.00 37.50	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(DRG) VIRTU Americas, LLC(NITE)  JANE STREET CAPITAL, LLC(JNST) Choe EDGX US Exchange(EDGX) USS Securities, LLC(SUSS) LLC(SUSS) LLC(SUSS)  Securities, LLC(SUSS)  October 2021 Option Contracts Summary  Total Non-Directed	Non-Directed Orders  28  18  10  3  3  4  Non-Directed Orders orders  Non-Directed Orders as % of All Orders	Non-Directed Orders(K)  43.08  27.69  15.38  4.62  4.62  3.08  1.54	Market Orders  25 12 10 0 0 Market Orders as % of Non-Directed Orders	Market Orders(%)	Marketable Limit Orders  1  1  0  0  0  Marketable Limit Orders s  6  0  0  0  0  0  0  0  0  0  0  0  0	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00  0.00	Non-Marketable Limit Orders  2 0 0 1 Non-Marketable Limit Orders as % of Non-Directed Orders as % of Non-Directed	Non-Marketable Limit Orders(%)   33.33   0.000   0.000   0.000   0.000   0.000   0.000   16.67	Other Orders  Other Orders as % of Non-Directed Orders	0.00 62.50 0.00 0.00 37.50	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  54  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(CIORG) VIRTU Americas, LLC(INTE) LLC(INT	Non-Directed Orders  28  18  10  3  3  4  Non-Directed Orders orders  Non-Directed Orders as % of All Orders	Non-Directed Orders(K)  43.08  27.69  15.38  4.62  4.62  3.08  1.54	Market Orders  25 12 10 0 0 Market Orders as % of Non-Directed Orders	Market Orders(%)	Marketable Limit Orders  1  1  0  0  0  Marketable Limit Orders s  6  0  0  0  0  0  0  0  0  0  0  0  0	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00  0.00	Non-Marketable Limit Orders  2 0 0 1 Non-Marketable Limit Orders as % of Non-Directed Orders as % of Non-Directed	Non-Marketable Limit Orders(%)   33.33   0.000   0.000   0.000   0.000   0.000   0.000   16.67	Other Orders  Other Orders as % of Non-Directed Orders	0.00 62.50 0.00 0.00 37.50	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Orders  54  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(CIORG) VIRTU Americas, LLC(INTE) LLC(INT	Non-Directed Orders  28  18  10  3  3  4  Non-Directed Orders orders  Non-Directed Orders as % of All Orders	Non-Directed Orders(K)  43.08  27.69  15.38  4.62  4.62  3.08  1.54	Market Orders  25 12 10 0 0 Market Orders as % of Non-Directed Orders	Market Orders(%)	Marketable Limit Orders  1  1  0  0  0  Marketable Limit Orders s  6  0  0  0  0  0  0  0  0  0  0  0  0	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00  0.00	Non-Marketable Limit Orders  2 0 0 1 Non-Marketable Limit Orders as % of Non-Directed Orders as % of Non-Directed	Non-Marketable Limit Orders(%)   33.33   0.000   0.000   0.000   0.000   0.000   0.000   16.67	Other Orders  Other Orders as % of Non-Directed Orders	0.00 62.50 0.00 0.00 37.50	Paid/Received for Market Orders(USD)  0 0 0 0 0 0 0 0 Net Payment	Paid/Received for Market Orders(cents per hundred shares)  0 0 0 0 0 0 0 0 Net Payment Paid/Received for	Paid/Received for Marketable Limit Orders(USD)  0 0 0 0 0 0 0 0 Net Payment	Paid/Received for Marketable Limit Orders(cents per hundred shares)  0  0  0  0  0  0  Net Payment Paid/Received for	Paid/Received fall  On-Marketable  Umit Orders(USD)  0  0  0  0  0  0  Net Payment	Paid/Received for  Net Payment Paid/Received for	Paid/Received for Other Orders (USD)	Paid/Received for Other Orders/Cents per hundred shares)  0 0 0 0 0 0 0 0 0 Net Payment Paid/Received for
Orders  Venues  Venue - Non- directed Order Flow (Itadel Securities) LLC(LORG) URTU Americas, LLC(INTE) JANE STREET CAPITAL, LLC(JNST) Cobe EDOSK US Equities Exchange(EDSK) UBS Securities, LLC(UBSS) Two Sigma Securities, LLC(SOHO)  NASDAQ Execution Services, LLC(NSDQ) October 2021 Option Contracts Summary  Total Non-Directed Orders  0 Venues	Non-Directed Orders  28 18 10 3 3 2 11 Non-Directed Orders 0.00	Non-Directed   Orders(K)	Market Orders  25 12 10 0 0 Market Orders as % of Non-Directed Orders	Market Orders(%)	Marketable Limit Orders  1 1 0 0 0 Marketable Limit Orders as work Orders of the wo	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00  0.00	Non-Marketable Limit Orders  2 0 0 1 Non-Marketable Limit Orders as % of Non-Directed Orders 0.00	Non-Marketable   Limit Orders(%)   33.33   0.00	Other Orders  Other Orders as % of Non-Directed Orders	0.00 62.50 0.00 0.00 37.50	Paid/Received for Market Orders(USD)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Paid / Received for Market Orders(cents per hundred shares)  0 0 0 0 0 0 0 0 0 Net Payment Paid / Received for Market Mar	Paid/Received for Marketable Limit Orders(USD)  0 0 0 0 0 0 0 0 Net Payment Paid/Received for	Paid/Received for Marketable Limit Orders(cents per hundred shares)  0  0  0  0  0  0  0  Net Payment Paid/Received for Marketable Limit	Paid/Received for  Output  Description  Output  Des	Paid/Received for Non-Marketable Limit Orders(cents per hundred shares) 0 0 0 0 0 0 0 0 0 0 0	Paid/Received for Other Orders (USD)	Paid Received for Other Orders (cents per hundred shares)  0 0 0 0 0 0 0 0 Net Payment Paid Received for Other Orders (cents per hundred p
Orders  Venues  Venues  Venue Non- directed Order Flow Citadel Securities LLC(ICNE) VIRTU Americas, LLC(INTE) LLC(IN	Non-Directed Orders  28  18  10  3  3  2  Non-Directed Orders as % of All Orders  0.00	Non-Directed   Orders(%)	Market Orders  10  0  0  10  Market Orders as % of Non-Directed Orders 0.00	Market Orders(%) 51.02 24.49 20.41 0.00 0.00 4.08 Total Marketable Limit Orders 0	Marketable Limit Orders  1  1  0  0  0  0  Marketable Limit Orders as % of Non-Directed Orders 0.00	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00  0.00  Total Non-Marketable Limit Orders	Non-Marketable Limit Orders  2 0 0 3 0 1 1 Non-Marketable Limit Orders as % of Non-Directed Orders 0.00	Non-Marketable   Limit Orders(%)   33.33   0.00   0.00     0.00     0.00     16.67     Total Other Orders   0     Non-Marketable     Non-Marketable	Other Orders  Other Orders as % of Non-Directed Orders  0.00	0.000 62.50 0.000 37.50 0.000	Paid/Received for Market Orders(USD)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Paid / Received for Market Orders(cents per hundred shares)  0 0 0 0 0 0 0 0 0 Net Payment Paid / Received for Market Orders(cents per hundred shares)	Paid/Received for Marketable Limit Orders(USD)  0 0 0 0 0 0 0 0 0 Net Payment Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per hundred shares)  0  0  0  0  0  0  Net Payment Paid/Received for Marketable Limit Orders(cents per hundred shares)	Paid/Received fall Umit Orders(USD)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Paid/Received for Non-Marketable Umit Orders(cents per hundred shares)  0 0 0 0 0 0 0 0 0 Net Payment Paid/Received for Non-Marketable Umit Orders(cents per hundred shares)	Paid/Received for Other Orders (USD)	Paid Received for Other Orders/cents per hundred shares)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Orders  54  Venues  Venue - Non- directed Order Flow Citadel Securities LLC(DRG) VIRTU Americas, LLC(MTS) JANE STREET CAPITAL, LLC(JNST) Choe EDGX US Equities Exchange(EDGX) UBS Securities, LLC(SOHO)  NASDAQ Execution Services, LLC(NSDQ) October 2021 Option Contracts Summary  Total Non-Directed Orders  0  Venues	Non-Directed Orders  28  18  10  3  3  2  Non-Directed Orders as % of All Orders  0.00	Non-Directed   Orders(K)	Market Orders  10  0  0  10  Market Orders as % of Non-Directed Orders 0.00	Market Orders(%)	Marketable Limit Orders  1  1  0  0  0  0  Marketable Limit Orders a % of Non-Directed Orders 0.00	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00  0.00	Non-Marketable Limit Orders  2 0 0 1 Non-Marketable Limit Orders as % of Non-Directed Orders 0.00	Non-Marketable   Limit Orders(%)   33.33   0.00   0.00     0.00     0.00     16.67     Total Other Orders   0     Non-Marketable     Non-Marketable	Other Orders  Other Orders as % of Non-Directed Orders	0.000 62.50 0.000 37.50 0.000	Paid/Received for Market Orders(USD)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Paid / Received for Market Orders(cents per hundred shares)  0 0 0 0 0 0 0 0 0 Net Payment Paid / Received for Market Mar	Paid/Received for Marketable Limit Orders(USD)  0 0 0 0 0 0 0 0 Net Payment Paid/Received for	Paid/Received for Marketable Limit Orders(cents per hundred shares)  0  0  0  0  0  0  0  Net Payment Paid/Received for Marketable Limit	Paid/Received for Non-Marketable Limit Orders(USD)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Paid/Received for Non-Marketable Limit Orders(cents per hundred shares) 0 0 0 0 0 0 0 0 0 0 0	Paid/Received for Other Orders (USD)	Paid/Received for Other Orders/cents per hundred shares)  0 0 0 0 0 0 0 0 0 Net Payment Paid/Received for Other Orders/cents per hundred shares

						1	1											
November 2021																		
S&P 500 Stocks																		
Summary					Marketable Limit		Non-Marketable											
	Non-Directed		Market Orders as %		Orders as % of		Limit Orders as %		Other Orders as %									
Total Non-Directed			of Non-Directed	Total Marketable	Non-Directed		of Non-Directed	Total Other	of Non-Directed									
Orders 98	Orders 100.00	Orders 76	Orders 77.55	Limit Orders	Orders 0.00	Total Non-Marketable Limit Orders	Orders 10.20	Orders 12	Orders 12.24									
98	100.00	/6	//.55	0	0.00	10	10.20	12	12.24									
Venues																		
											Net Payment	Net Payment Paid/Received for	Net Payment	Net Payment Paid/Received for	Net Payment	Net Payment Paid/Received for		Net Payment Paid/Received for
											Paid/Received for	Market	Paid/Received for		Paid/Received for	Non-Marketable	Net Payment	Other Orders(cents
Venue - Non-	Non-Directed	Non-Directed			Marketable Limit		Non-Marketable	Non-Marketable			Market	Orders(cents per	Marketable Limit	Orders(cents per	Non-Marketable	Limit Orders(cents	Paid/Received for	
directed Order Flow	Orders	Orders(%)	Market Orders	Market Orders(%)	Orders	Marketable Limit Orders(%)	Limit Orders	Limit Orders(%)	Other Orders	Other Orders(%)	Orders(USD)	hundred shares)	Orders(USD)	hundred shares)	Limit Orders(USD)	per hundred shares)	Other Orders(USD)	shares)
VIRTU Americas, LLC(NITE)	39	31.45	26	34.21	Ι.,	0.00		5.56	11	91.67								
Citadel Securities	39	31.43	20	34.21		0.00	2	5.50	11	91.67		-	0	0	0		1	, 0
LLC(CDRG)	35	28.23	34	44.74	0	0.00	0	0.00	1	8.33	. 0	0	0	0	0	0	0	0
NASDAQ Execution																		
Services, LLC(NSDQ)	22	17.74		0.00	۱ .	0.00	22	61.11		0.00	ا ا			۰ ا	0		ه ا	ه ا
JANE STREET				J	Ι.				] .				.	l .	_			
CAPITAL, LLC(JNST) Choe EDGX US	13	10.48	13	17.11	l	0.00	, 0	0.00	1 0	0.00	<del>'  °</del>	1	- 0	- °	0	- 0	'H	<u>'  °</u>
Equities												1						
Exchange(EDGX)	8	6.45	0	0.00	0	0.00	8	22.22	0	0.00	0	0	0	0	0	0	0	0
New York Stock		3.23	_		Ι	0.00		****	_	0.00						l .		,
Exchange(NYSE) G1 Execution	4	3.23	- 0	0.00	l "	0.00	4	11.11	- 0	0.00	1	1	- 0	- 0	0	- 0	1 "	, 0
Services,																		
LLC(ETMM)	2	1.61	2	2.63	0	0.00	0	0.00	0	0.00	0	0	0	0	0	0	0	0
Two Sigma Securities,																		
LLC(SOHO)	1	0.81	1	1.32		0.00	0	0.00		0.00		0	0	0	0	0	ه ا	0
November 2021																		
Non-S&P 500 Stocks																		
Summary																		
	Non-Directed		Market Orders as %		Marketable Limit		Non-Marketable Limit Orders as %		Other Orders as %									
Total Non-Directed	Non-Directed Orders as % of All	Total Market	Market Orders as % of Non-Directed	Total Marketable	Orders as % of Non-Directed		Limit Orders as % of Non-Directed	Total Other	Other Orders as % of Non-Directed									
Total Non-Directed Orders	Orders as % of All Orders	Orders	of Non-Directed Orders	Limit Orders	Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders	Limit Orders as % of Non-Directed Orders	Orders	of Non-Directed Orders									
Total Non-Directed	Orders as % of All	Orders	of Non-Directed Orders	Limit Orders	Orders as % of Non-Directed	Total Non-Marketable Limit Orders	Limit Orders as % of Non-Directed	Orders	of Non-Directed									
Total Non-Directed Orders	Orders as % of All Orders	Orders	of Non-Directed Orders	Limit Orders	Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders	Limit Orders as % of Non-Directed Orders	Orders	of Non-Directed Orders									
Total Non-Directed Orders	Orders as % of All Orders	Orders	of Non-Directed Orders	Limit Orders	Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders	Limit Orders as % of Non-Directed Orders	Orders	of Non-Directed Orders	1								
Total Non-Directed Orders	Orders as % of All Orders	Orders	of Non-Directed Orders	Limit Orders	Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders	Limit Orders as % of Non-Directed Orders	Orders	of Non-Directed Orders			Net Payment		Net Payment		Net Payment		Net Payment
Total Non-Directed Orders	Orders as % of All Orders	Orders	of Non-Directed Orders	Limit Orders	Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders 7	Limit Orders as % of Non-Directed Orders	Orders	of Non-Directed Orders		Net Payment Paid/Received for	Paid/Received for	Net Payment Paid/Received for	Paid/Received for	Net Payment Paid/Received for	Paid/Received for	Net Payment	Paid/Received for
Total Non-Directed Orders 165 Venues	Orders as % of All Orders 100.00  Non-Directed	Orders	of Non-Directed Orders 60.00	Limit Orders 5	Orders as % of Non-Directed Orders 3.03	7	Limit Orders as % of Non-Directed Orders 7 4.24	Orders 54	of Non-Directed Orders 32.73		Paid/Received for Market	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Net Payment Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 165 Venues	Orders as % of All Orders 100.00  Non-Directed	Orders 99	of Non-Directed Orders	Limit Orders 5	Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders  7  Marketable Limit Orders(%)	Limit Orders as % of Non-Directed Orders 4.24	Orders 54	of Non-Directed Orders	Other Orders(%)	Paid/Received for	Paid/Received for	Paid/Received for	Paid/Received for	Paid/Received for	Paid/Received for Non-Marketable Limit Orders(cents	Net Payment Paid/Received for Other Orders(USD)	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders  165  Venues  Venue - Non- directed Order Flow VIRTU Americas,	Orders as % of All Orders 100.00  Non-Directed	Orders 99 Non-Directed Orders(%)	of Non-Directed Orders 60.00	Limit Orders  5  Market Orders(%)	Orders as % of Non-Directed Orders 3.03	7 Marketable Limit Orders(%)	Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders	Non-Marketable Limit Orders(%)	of Non-Directed Orders 32.73	Other Orders(%)	Paid/Received for Market	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 165 Venues	Orders as % of All Orders 100.00  Non-Directed	Orders 99 Non-Directed	of Non-Directed Orders 60.00	Limit Orders 5	Orders as % of Non-Directed Orders 3.03	7	Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders	Orders 54	of Non-Directed Orders 32.73		Paid/Received for Market	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders  165  Venues  Venue - Non-directed Order Flow VIRTU Americas, LLC(NITE)	Orders as % of All Orders 100.00  Non-Directed	Orders 99 Non-Directed Orders(%)	of Non-Directed Orders 60.00	Limit Orders  5  Market Orders(%)	Orders as % of Non-Directed Orders 3.03	7 Marketable Limit Orders(%)	Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders 1	Non-Marketable Limit Orders(%)	of Non-Directed Orders 32.73	Other Orders(%)	Paid/Received for Market	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 165  Venues  Venue - Non- directed Order Flow VIRTU Americas, LLC(NITI) Citadel Securities LLC(CDRG)	Orders as % of All Orders 100.00  Non-Directed	Orders 99 Non-Directed Orders(%) 51.19	of Non-Directed Orders 60.00 Market Orders	Limit Orders 5  Market Orders(%)  35.35	Orders as % of Non-Directed Orders 3.03	Marketable Limit Orders(%)	Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders 1	Non-Marketable Limit Orders(%)	of Non-Directed Orders 32.73	Other Orders(%)	Paid/Received for Market	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 165 Venues  Venue - Non-directed Order Flow VIRTU Americas, LUC(DNTE) Citadel Securities LUC(CDRG) JANE STREET	Orders as % of All Orders 100.00  Non-Directed	Non-Directed Orders(%) 51.19	Market Orders  Market Orders	Market Orders(%) 35.35	Orders as % of Non-Directed Orders 3.03	Marketable Limit Orders(%) 40.00 20.00	Limit Orders as % of Non-Directed Orders Orders 4.24  Non-Marketable Limit Orders 1	Non-Marketable Limit Orders(%)	of Non-Directed Orders 32.73	Other Orders(%) 87.27	Paid/Received for Market	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 165 Venues  Venue - Non-directed Order Flow VIRTU Americas, LICL(DINT) Citadel Securities LLC(CDRG) JANE STREET CAPITAL, LLC(INST)	Non-Directed Orders  86  56	Orders 99 Non-Directed Orders(%) 51.19	of Non-Directed Orders 60.00 Market Orders	Limit Orders 5  Market Orders(%)  35.35	Orders as % of Non-Directed Orders 3.03	Marketable Limit Orders(%)	Limit Orders as % of Non-Directed Orders Orders 4.24  Non-Marketable Limit Orders 1	Non-Marketable Limit Orders(%)	of Non-Directed Orders 32.73	Other Orders(%)	Paid/Received for Market	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 165  Venues  Venue - Non-directed Order Flow VIRTU Americas, LLC(NITE) Citadel Securities LLC(CORG)  JANE STREET CAPITAL, LLC(JINST) Choe EDGX US Equities	Non-Directed Orders  86  56	99  Non-Directed Orders(%)  51.19  33.33	Market Orders  35 48	Limit Orders   5	Orders as % of Non-Directed Orders Orders 3.03  Marketable Limit Orders  2 1	Marketable Limit Orders(%) 40.00 20.00	Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders 1  1 0	Non-Marketable Limit Orders(%) 11.11	of Non-Directed Orders 32.73 32.73 Other Orders 48 6	Other Orders(%) 87.27 10.91	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 165 Venues 165 Venues Non-directed Order Flow VIRTU Americas, LUC(DNTE) Citadel Securities LUC(CDRG) JANE STREET CAPITAL, LUC(LINST) Cobe EDGX US Equities Exchange(EDGX)	Non-Directed Orders  86  56	Non-Directed Orders(%) 51.19	Market Orders  35 48	Market Orders(%) 35.35	Orders as % of Non-Directed Orders Orders 3.03  Marketable Limit Orders  2 1	Marketable Limit Orders(%) 40.00 20.00	Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders 1  1 0	Non-Marketable Limit Orders(%)	of Non-Directed Orders 32.73 32.73 Other Orders 48 6	Other Orders(%) 87.27	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 165 Venues 165 Venues Venue - Non-directed Order Flow VIRTU Americas, LUC(MTE) Citadel Securities LUC(CDMG) JANE STREET CAPITAL, LUC(INST) Cobe EDGX US Equities Exchange(EDGX) UBS Securities, LUC(USS)	Non-Directed Orders  86  56	99  Non-Directed Orders(%)  51.19  33.33	Market Orders  Market Orders  35  48	Limit Orders   5	Orders as % of Marketable Limit Orders  2  1  0	Marketable Limit Orders(%) 40.00 20.00	Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders 1  1 0 0	Non-Marketable Limit Orders(%) 11.11	of Non-Directed Orders 32.73	Other Orders(%) 87.27 10.91	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 165  Venues  Venue - Non-directed Order Flow VIRTU Americas, LLC(NITE) CItadel Securities LLC(CORG)  JANE STREET CAPITAL, LLC(JINST) Choe EDGX US Each Sequities Exchange(EDGX) LUS Securities, LLC(JUSSS)	Non-Directed Orders  86  56	99	Market Orders  Market Orders  35  48  13	Market Orders(%)  35.35  48.48  13.13  0.00	Orders as % of Marketable Limit Orders  2  1  1  0  1	Marketable Limit Orders(%) 40.00 20.00 0.00 20.00	Non-Marketable Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders 1 0 0 6	Non-Marketable   Limit Orders(%)	of Non-Directed Orders 32.73	Other Orders(%)  87.27  10.91  0.00  0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venue - Non-directed Orders  165  Venues  Venue - Non-directed Order Flow VIRTU Americas, LUC(MTE)  JANE STREET CAPITAL, LUC(INST) LOBO EDGN US Equities Exchange(EDGX) UBS Securities, LUC(UBSS) Instinet BlockCross(BLOX)	Non-Directed Orders  86  56	99   Non-Directed   Orders(%)   51.19   33.33   8.33	Market Orders  Market Orders  35  48  13	Market Orders(%)  35.35  48.48  13.13	Orders as % of Marketable Limit Orders  2  1  1  0  1	Marketable Limit Orders(%) 40.00 20.00 20.00	Non-Marketable Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders 1 0 0 6	Non-Marketable Limit Orders(%)   11.11   11.11	of Non-Directed Orders 32.73	Other Orders(%) 87.27 10.91 0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 165  Venues  Venue - Non-directed Order Flow VIRTU Americas, LLC(NITE) Citadel Securities LLC(CDRG)  JANE STREET CAPITAL, LLC(JAST) Choe EDGX US Exchange(EDGX) LLC(JUSSS) Instinct BlockCross(BLIX) Instinct BlockCross(BLIX) GG 1 Execution	Non-Directed Orders  86  56	99	Market Orders  Market Orders  35  48  13	Market Orders(%)  35.35  48.48  13.13  0.00	Orders as % of Marketable Limit Orders  2  1  1  0  1	Marketable Limit Orders(%) 40.00 20.00 0.00 20.00	Non-Marketable Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders 1 0 0 6	Non-Marketable   Limit Orders(%)	of Non-Directed Orders 32.73	Other Orders(%)  87.27  10.91  0.00  0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venue - Non-directed Orders  165  Venues  Venue - Non-directed Order Flow VIRTU Americas, LUC(MTE)  JANE STREET CAPITAL, LUC(INST) LOBO EDGN US Equities Exchange(EDGX) UBS Securities, LUC(UBSS) Instinet BlockCross(BLOX)	Non-Directed Orders  86  56	99	Market Orders  Market Orders  35  48  13	Market Orders(%)  35.35  48.48  13.13  0.00	Orders as % of Non-Directed Orders 3.03  Marketable Limit Orders 2  1  0 0 1	Marketable Limit Orders(%) 40.00 20.00 0.00 20.00	Non-Marketable Limit Orders a 5% of Non-Directed Orders 4.24  Non-Marketable Limit Orders  1  0  6 0 0	Non-Marketable   Limit Orders(%)	Other Orders  Other Orders  48  66  0  1	Other Orders(%)  87.27  10.91  0.00  0.00	Paid Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venue - Non-directed Orders  Venue - Non-directed Order Flow VIRTU Americas, LLC(NITE) IAME STREET CAPITAL, LLC(INST) JANE STREET CAPITAL, LLC(INST) CODE DEOX US Equities LLC(CURS) Instinct LLC(URS) Instinct Services, LLC(INST) LLC(URS)	Non-Directed Orders  86  56	Non-Directed   Orders(%)	Market Orders  Market Orders  35  48  13  0  1  1	Market Orders 5  Market Orders(%)  35.35  48.48  13.13  0.00  1.01	Orders as % of Non-Directed Orders 3.03  Marketable Limit Orders 2  1  0 0 0 0	Marketable Limit Orders(%)  40.00 20.00 20.00 20.00 0.00 0.00	Non-Marketable Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders  1  0  6  0 0 0	Non-Marketable   Limit Orders(%)	Other Orders  Other Orders  48  66  0  0  0  0  0 0 0 0 0 0 0 0	Other Orders(%) 87.27 10.91 0.00 0.00 1.82	Paid Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venue - Non- directed Orders  Venue - Non- directed Order Flow VIRTU Americas, LLC(NITE) Citadel Securities LLC(CORG)  JANE STREET CAPITAL, LLC(JNST) Choe EDGX US Equities Exchange(EDGX) LLC(JUSSS) Instinct BlockCross(BLICX) GI Execution Services, LLC(JUSS) New York Stock Exchange(NYS)	Non-Directed Orders  86  56	Non-Directed   Orders(%)	Market Orders  Market Orders  35  48  13  0  1  1	Market Orders(%)  35.35  48.48  13.13  0.00  1.01	Orders as % of Non-Directed Orders 3.03  Marketable Limit Orders 2  1  0 0 0 0	Marketable Limit Orders(%)  40.00 20.00 20.00 20.00 0.00	Non-Marketable Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders  1  0  6  0 0 0	Non-Marketable   Limit Orders(%)	Other Orders  Other Orders  48  66  0  0  0  0  0 0 0 0 0 0 0 0	Other Orders(%) 87.27 10.91 0.00 0.00 1.82	Paid Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venue - Non-directed Orders  Venue - Non-directed Order Flow VIRTU Americas, LLC(NITE)  IANE STREET CAPITAL LLC(LOST)  JANE STREET CAPITAL LLC(LOST)  JANE STREET CAPITAL LLC(LOST)  JANE STREET LLC(LOST)  JANE STREET CAPITAL LLC(LOST)  JONE DOST US Equities LLC(LOST)  Instinct LLC(UBSS)  Instinct LLC(UBSS)  LLC(LOST)  GE Exchange(EDGX)  GI Execution Services, LLC(ETMM)  New York Stock Exchange(NYSE)	Non-Directed Orders  86  56	Non-Directed   Orders(%)	Market Orders  Market Orders  35  48  13  0  1  1	Market Orders 5  Market Orders(%)  35.35  48.48  13.13  0.00  1.01	Orders as % of Non-Directed Orders 3.03  Marketable Limit Orders 2  1  0 0 0 0	Marketable Limit Orders(%)  40.00 20.00 20.00 20.00 0.00 0.00	Non-Marketable Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders  1  0  6  0 0 0	Non-Marketable   Limit Orders(%)	Other Orders  Other Orders  48  66  0  0  0  0  0 0 0 0 0 0 0 0	Other Orders(%) 87.27 10.91 0.00 0.00 1.82	Paid Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 165  Venues  Venue - Non-directed Order Flow VIRTU Americas, LLC(NITE) Citadel Securities LLC(CDRG)  JANE STREET CAPITAL LUCINST) Choe EDGX US Equities Exchange(EDGX) LUCINESS) Institute Securities, LLC(USSS) Town Sigma Securities, Jugma Securities, Jugm	Non-Directed Orders 100.00 Non-Directed Orders 86	Non-Directed   Orders(%)	Market Orders  Market Orders  35  48  13  0  1  1	Market Orders 5  Market Orders(%) 35.35  48.48  13.13  0.00  1.01	Orders as % of Marketable Limit Orders  1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Marketable Limit Orders(%)  40.00 20.00 20.00 20.00 0.00 0.00	Non-Marketable Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders 1 0 0 0 1 1	Non-Marketable   Limit Orders(%)	Other Orders 32.73  Other Orders 48  60  00  00  00  00  00  00  00  00  0	Other Orders(%) 87.27 10.91 0.00 0.00 1.82	Paid Received for Market Orders (USD)  0 0 0 0 0 0 0 0	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venue - Non-directed Orders  Venue - Non-directed Order Flow VIRTU Americas, LLC(NITE)  IANE STREET CAPITAL LLC(LOST)  JANE STREET CAPITAL LLC(LOST)  JANE STREET CAPITAL LLC(LOST)  JANE STREET LLC(LOST)  JANE STREET CAPITAL LLC(LOST)  JONE DOST US Equities LLC(LOST)  Instinct LLC(UBSS)  Instinct LLC(UBSS)  LLC(LOST)  GE Exchange(EDGX)  GI Execution Services, LLC(ETMM)  New York Stock Exchange(NYSE)	Non-Directed Orders 100.00 Non-Directed Orders 86	Non-Directed   Orders(%)	Market Orders  Market Orders  35  48  13  0  1  1	Market Orders(%)  35.35  48.48  13.13  0.00  1.01  0.00	Orders as % of Marketable Limit Orders  1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Marketable Limit Orders(%)  40.00 20.00 20.00 0.00 0.00 0.00	Non-Marketable Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders 1 0 0 0 1 1	Non-Marketable   Limit Orders	Other Orders 32.73  Other Orders 48  60  00  00  00  00  00  00  00  00  0	0ther Orders(%) 87.27 10.91 0.00 0.00 1.82	Paid Received for Market Orders (USD)  0 0 0 0 0 0 0 0	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venue - Non-directed Orders  Venue - Non-directed Order flow WIRTU America Control of State o	Non-Directed Orders 100.00 Non-Directed Orders 86	Non-Directed   Orders(%)	Market Orders  Market Orders  35  48  13  0  1  1	Market Orders(%)  35.35  48.48  13.13  0.00  1.01  0.00	Orders as % of Marketable Limit Orders  1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Marketable Limit Orders(%)  40.00 20.00 20.00 0.00 0.00 0.00	Non-Marketable Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders 1 0 0 0 1 1	Non-Marketable   Limit Orders	Other Orders 32.73  Other Orders 48  60  00  00  00  00  00  00  00  00  0	0ther Orders(%) 87.27 10.91 0.00 0.00 1.82	Paid Received for Market Orders (USD)  0 0 0 0 0 0 0 0	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venue - Non-directed Orders  Venue - Non-directed Order flow WIRTU America Control of State o	Non-Directed Orders 100.00 Non-Directed Orders 86	Non-Directed   Orders(%)	Market Orders  Market Orders  35  48  13  0  1  1	Market Orders(%)  35.35  48.48  13.13  0.00  1.01  0.00	Orders as % of Marketable Limit Orders  1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Marketable Limit Orders(%)  40.00 20.00 20.00 0.00 0.00 0.00	Non-Marketable Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders 1 0 0 0 1 1	Non-Marketable   Limit Orders	Other Orders 32.73  Other Orders 48  60  00  00  00  00  00  00  00  00  0	0ther Orders(%) 87.27 10.91 0.00 0.00 1.82	Paid Received for Market Orders (USD)  0 0 0 0 0 0 0 0	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venue - Non- directed Orders  Venue - Non- directed Order Flow VIRTU Americas, LLC(INTE) Citadel Securities LLC(CDRG)  JANE STREET CAPITAL, LUCINSTI Choe EDGX US Exchange(EDGX) USS Securities, LLC(USSS) Instinet BlockCross(BLIX) GI Execution Services, LLC(ETMM) New York Stock Exchange(NYSE) Two Sigma Securities, LLC(SOHO)  New York Stock Exchange(NYSE) Two Sigma Securities, LLC(SOHO)	Non-Directed Orders 100.00 Non-Directed Orders 86	Non-Directed   Orders(%)	Market Orders  Market Orders  35  48  13  0  1  1	Market Orders(%)  35.35  48.48  13.13  0.00  1.01  0.00	Orders as % of Marketable Limit Orders  1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Marketable Limit Orders(%)  40.00 20.00 20.00 0.00 0.00 0.00	Non-Marketable Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders 1 0 0 0 1 1	Non-Marketable   Limit Orders	Other Orders 32.73  Other Orders 48  60  00  00  00  00  00  00  00  00  0	0ther Orders(%) 87.27 10.91 0.00 0.00 1.82	Paid Received for Market Orders (USD)  0 0 0 0 0 0 0 0	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venue - Non- directed Orders  Venues  Venue - Non- directed Order Flow WIRTU America, LLC(WIRT)  ANNE STREET CAPITAL LECINSTI CORE EDGX US Equities LLC(LORS) Instinet LLC(UBSS) Instine	Non-Directed Orders 100.00 Non-Directed Orders 86	Non-Directed   Orders(%)	Market Orders  Market Orders  35  48  13  0  1  1	Market Orders(%)  35.35  48.48  13.13  0.00  1.01  0.00	Orders as % of Marketable Limit Orders  2 1 1 0 0 0 0 0 0	Marketable Limit Orders(%)  40.00 20.00 20.00 0.00 0.00 0.00	Non-Marketable Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders 1  1  0  0  1  0  0  0  0  0	Non-Marketable   Limit Orders	Other Orders 32.73  Other Orders 48  60  00  00  00  00  00  00  00  00  0	0ther Orders(%) 87.27 10.91 0.00 0.00 1.82	Paid Received for Market Orders (USD)  0 0 0 0 0 0 0 0	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venue - Non-directed Orders  Venue - Non-directed Order Flow Virtu Americas, LLC(INTE) Citadel Securities LLC(CDRG)  JANE STREET CAPITAL, LLC(INST) Choe EDGX US Exchange(EDGX) USS Securities, LLC(USSS) Instinct Blockross(ELKOX) G1 Execution Services, LLC(ETMM) New York Stock Exchange(NYSE) Two Sigma Securities, LLC(SOHO) November 2021 Option Contracts	Non-Directed Orders 866 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Non-Directed   Orders(%)	Market Orders 60.00  Market Orders 35  48  0  1  0  1  1	Market Orders(%)  35.35  48.48  13.13  0.00  1.01  0.00	Orders as % of Marketable Limit Orders  1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Marketable Limit Orders(%)  40.00 20.00 20.00 0.00 0.00 0.00	Non-Marketable	Non-Marketable   Limit Orders	Other Orders 32.73  Other Orders 48  60  00  00  00  00  00  00  00  00  0	0ther Orders(%) 87.27 10.91 0.00 0.00 1.82	Paid Received for Market Orders (USD)  0 0 0 0 0 0 0 0	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venue - Non-directed Orders  Venue - Non-directed Order Flow Virtu Americas, LLC(NITE) Citadel Securities LLC(CDRG)  JANE STREET CAPITAL, LUCINSTI Choe EDGX US Exchange(EDGX) LLC(SUSS) Instinct BlockCross(ELLOX) GE Execution Services, LLC(ETMM) New York Stock Exchange(NYSE) Two Sigma Securities, LLC(SOHO)  November 2021 Option Contracts Summary	Non-Directed Orders 100.00  Non-Directed Orders 866 2 11 1 1 1 1 Non-Directed Orders 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Non-Directed   Orders(%)	Market Orders  Market Orders  35  48  13  0  1  1	Market Orders (%)  35.35  48.48  13.13  0.00  1.01  0.00  1.01  Total Marketable	Orders as % of Marketable Limit Orders  Marketable Limit Orders  Marketable Limit Orders  Marketable Limit Orders	Marketable Limit Orders(%)  40.00  20.00  0.00  0.00  0.00  0.00	Non-Marketable Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders  0 0 0 Non-Marketable Limit Orders s % of Non-Directed Orders 1.	Non-Marketable   Limit Orders	Other Orders 32.73  Other Orders 48  60  00  00  00  00  00  00  00  00  0	0ther Orders(%) 87.27 10.91 0.00 0.00 1.82	Paid Received for Market Orders (USD)  0 0 0 0 0 0 0 0	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 165  Venues 165  Venue - Non-directed Order Flow Virtu Americas, LLC(NITE) Citadel Securities LLC(CDRG)  JANE STREET CAPITAL, LLC(INST) Choe EDGX US Exchange(EDGX) UBS Securities, LLC(USSS) Institute of the Company of th	Non-Directed   Orders   Section   Section	Non-Directed Orders(%)	Market Orders as % of Non-Directed Orders  Market Orders  Market Orders  Market Orders as % of Non-Directed Orders	Market Orders 5  Market Orders(%)  35.35  48.48  13.13  0.00  1.01  0.00  1.01  Total Marketable Limit Orders	Orders as % of Non-Directed Orders  Marketable Limit Orders  1  0  0  0  Marketable Limit Orders  2  1  Marketable Limit Orders  Non-Directed Orders as % of Non-Directed Orders	Marketable Limit Orders(%)   40.00   20.00	Non-Marketable Limit Orders as % of Non-Directed Orders  1  1  0  0  1  Non-Marketable Limit Orders  0  0  0  0  Non-Marketable Limit Orders  0  0  0  0  0  0  0  0  0  0  0  0  0	Non-Marketable   Limit Orders(%)	Other Orders as % of Non-Directed Orders  Other Orders  48  66  00  00  00  00  00  00  00  00  0	Other Orders(%) 87.27 10.91 0.00 0.00 0.00 0.00 0.00 0.00	Paid Received for Market Orders (USD)  0 0 0 0 0 0 0 0	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venue - Non-directed Orders  Venue - Non-directed Order Flow Virtu Americas, LLC(NITE) Citadel Securities LLC(CDRG)  JANE STREET CAPITAL, LLC(INST) Choe EDGX US Equities Exchange(EDGX) USB Securities, LLC(USSS) Instinct BlockCross(BLIX) GE Exchange(NYSE) Two Sigma Securities, LLC(SOHO)  November 2021 Option Contracts Summary	Non-Directed Orders 100.00  Non-Directed Orders 866 2 11 1 1 1 1 Non-Directed Orders 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Non-Directed Orders(%)	Market Orders 35 48 0 1 1 0 Market Orders 1 0 0 1 0 0 Market Orders 3 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Market Orders 5  Market Orders(%)  35.35  48.48  13.13  0.00  1.01  0.00  1.01  Total Marketable Limit Orders	Orders as % of Marketable Limit Orders  Marketable Limit Orders  Marketable Limit Orders  Marketable Limit Orders	Marketable Limit Orders(%)   40.00   20.00	Non-Marketable Limit Orders as % of Non-Directed Orders 4.24  Non-Marketable Limit Orders  0 0 0 Non-Marketable Limit Orders s % of Non-Directed Orders 1.	Non-Marketable   Limit Orders(%)	of Non-Directed Orders 32.73  Other Orders 48 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Other Orders(%) 87.27 10.91 0.00 0.00 0.00 0.00 0.00 0.00	Paid Received for Market Orders (USD)  0 0 0 0 0 0 0 0	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Venue - Non-directed Orders  Venue - Non-directed Order Flow Virtu Americas, LLC(NITE) Citadel Securities LLC(CDRG)  JANE STREET CAPITAL, LLC(INST) Choe EDGX US Equities Exchange(EDGX) USB Securities, LLC(USSS) Instinct BlockCross(BLIX) GE Exchange(NYSE) Two Sigma Securities, LLC(SOHO)  November 2021 Option Contracts Summary	Non-Directed   Orders   Section   Section	Non-Directed Orders(%)	Market Orders as % of Non-Directed Orders  Market Orders  Market Orders  Market Orders as % of Non-Directed Orders	Market Orders 5  Market Orders(%)  35.35  48.48  13.13  0.00  1.01  0.00  1.01  Total Marketable Limit Orders	Orders as % of Non-Directed Orders  Marketable Limit Orders  1  0  0  0  Marketable Limit Orders  2  1  Marketable Limit Orders  Non-Directed Orders as % of Non-Directed Orders	Marketable Limit Orders(%)   40.00   20.00	Non-Marketable Limit Orders as % of Non-Directed Orders  1  1  0  0  1  Non-Marketable Limit Orders  0  0  0  0  Non-Marketable Limit Orders  0  0  0  0  0  0  0  0  0  0  0  0  0	Non-Marketable   Limit Orders(%)	Other Orders as % of Non-Directed Orders  Other Orders  48  66  00  00  00  00  00  00  00  00  0	Other Orders(%) 87.27 10.91 0.00 0.00 0.00 0.00 0.00 0.00	Paid Received for Market Orders (USD)  0 0 0 0 0 0 0 0	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred

			1	1														
												Net Payment		Net Payment		Net Payment		Net Payment
											Net Payment	Paid/Received for	Net Payment	Paid/Received for	Net Payment	Paid/Received for		Paid/Received for
Venue - Non-	Non-Directed	Non-Directed			Marketable Limit		Non-Marketable	Non-Marketable			Paid/Received for Market	Market Orders(cents per	Paid/Received for Marketable Limit	Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Non-Marketable Limit Orders(cents	Net Payment Paid/Received for	Other Orders(cents per hundred
directed Order Flow	Orders	Orders(%)	Market Orders	Market Orders(%)	Orders	Marketable Limit Orders(%)	Limit Orders	Limit Orders(%)	Other Orders	Other Orders(%)	Orders(USD)	hundred shares)	Orders(USD)	hundred shares)	Limit Orders(USD)	per hundred shares)	Other Orders(USD)	shares)
December 2021																		
December 2021																		
S&P 500 Stocks																		
Summary					Marketable Limit		Non-Marketable											
	Non-Directed		Market Orders as %		Orders as % of		Limit Orders as %		Other Orders as %									
Total Non-Directed	Orders as % of All	Total Market	of Non-Directed	Total Marketable	Non-Directed		of Non-Directed	Total Other	of Non-Directed									
Orders	Orders 100.00	Orders 80	Orders 88.89	Limit Orders	Orders 0.00	Total Non-Marketable Limit Orders	Orders 8.89	Orders	Orders 2.22									
90	100.00	80	88.89	- 0	0.00	8	8.89		2.22									
Venues																		
											Net Payment	Net Payment Paid/Received for	Net Payment	Net Payment Paid/Received for	Net Payment	Net Payment Paid/Received for		Net Payment Paid/Received for
											Paid/Received for	Market	Paid/Received for	Marketable Limit	Paid/Received for	Non-Marketable	Net Payment	Other Orders(cents
Venue - Non-	Non-Directed	Non-Directed			Marketable Limit		Non-Marketable	Non-Marketable			Market	Orders(cents per	Marketable Limit	Orders(cents per	Non-Marketable	Limit Orders(cents	Paid/Received for	per hundred
directed Order Flow Citadel Securities	Orders	Orders(%)	Market Orders	Market Orders(%)	Orders	Marketable Limit Orders(%)	Limit Orders	Limit Orders(%)	Other Orders	Other Orders(%)	Orders(USD)	hundred shares)	Orders(USD)	hundred shares)	Limit Orders(USD)	per hundred shares)	Other Orders(USD)	shares)
LLC(CDRG)	34	29.82	32	40.00	l .	0.00	0	0.00	2	100.00			۱ .	۰ ا	۱ ،			
VIRTU Americas,																		
LLC(NITE)	25	21.93	25	31.25	0	0.00	0	0.00	0	0.00	0	0	0	0	0	0	0	0
												1						
NASDAQ Execution																		
Services, LLC(NSDQ)	25	21.93	0	0.00	1	100.00	24	77.42	0	0.00	0	0	0	0	0	0	0	0
JANE STREET																		
CAPITAL, LLC(JNST)	17	14.91	17	21.25	0	0.00		0.00		0.00	0	0	0	0	0		0	0
Choe EDGX US																		
Equities Exchange(EDGX)		5.26		0.00		0.00		19.35		0.00								
G1 Execution		3.20	-	0.00	- 0	0.00		19.55		0.00		-	,	0		0	0	
Services,			1									1						
LLC(ETMM)	3	2.63	3	3.75	- 0	0.00	0	0.00	- 0	0.00	0	0	0	0	0	0	0	0
Two Sigma Securities,																		
LLC(SOHO)	3	2.63	3	3.75	0	0.00	0	0.00		0.00	0	0	0	0	0	0	0	0
New York Stock																		
Exchange(NYSE)	1	0.88	- 0	0.00	- 0	0.00	1	3.23		0.00	0	1 0	0	- 0	0	0	0	0
December 2021																		
										-					1	1		
Non-S&P 500 Stocks			1	1										l				
Jul Jul Stocks																		
Summary					Manhatatt		Non-Mark 1984											
Summary	Non-Directed		Market Orders as %		Marketable Limit		Non-Marketable		Other Orders as %									
Summary  Total Non-Directed	Non-Directed Orders as % of All	Total Market	Market Orders as % of Non-Directed	Total Marketable	Orders as % of Non-Directed		Limit Orders as % of Non-Directed	Total Other	Other Orders as % of Non-Directed									
Summary	Orders as % of All Orders	Orders	of Non-Directed Orders	Limit Orders	Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders	Limit Orders as % of Non-Directed Orders	Total Other Orders	of Non-Directed Orders									
Summary  Total Non-Directed	Orders as % of All	Orders	of Non-Directed Orders	Limit Orders	Orders as % of Non-Directed	Total Non-Marketable Limit Orders	Limit Orders as % of Non-Directed		of Non-Directed									
Total Non-Directed Orders	Orders as % of All Orders	Orders	of Non-Directed Orders	Limit Orders	Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders	Limit Orders as % of Non-Directed Orders		of Non-Directed Orders									
Summary  Total Non-Directed	Orders as % of All Orders	Orders	of Non-Directed Orders	Limit Orders	Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders 6	Limit Orders as % of Non-Directed Orders		of Non-Directed Orders									
Total Non-Directed Orders	Orders as % of All Orders	Orders	of Non-Directed Orders	Limit Orders	Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders 6	Limit Orders as % of Non-Directed Orders		of Non-Directed Orders		Net Payment	Net Payment	Net Payment	Net Payment	Net Payment	Net Payment		Net Payment
Total Non-Directed Orders	Orders as % of All Orders	Orders	of Non-Directed Orders	Limit Orders	Orders as % of Non-Directed Orders	Total Non-Marketable Limit Orders 6	Limit Orders as % of Non-Directed Orders		of Non-Directed Orders		Net Payment Paid/Received for	Net Payment Paid/Received for Market	Net Payment Paid/Received for	Net Payment Paid/Received for Marketable Limit	Net Payment Paid/Received for	Net Payment Paid/Received for Non-Marketable	Net Payment	Net Payment Paid/Received for Other Orders(cents
Total Non-Directed Orders 69  Venues	Orders as % of All Orders 100.00	Orders 49 Non-Directed	of Non-Directed Orders 71.01	Limit Orders 2	Orders as % of Non-Directed Orders 2.90	6	Limit Orders as % of Non-Directed Orders 8.70	Orders 12	of Non-Directed Orders 17.39		Paid/Received for Market	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 69  Venues  Venue - Non-directed Order Flow	Orders as % of All Orders 100.00	Orders 49	of Non-Directed Orders 71.01	Limit Orders	Orders as % of Non-Directed Orders 2.90	Total Non-Marketable Limit Orders 6  Marketable Limit Orders(%)	Limit Orders as % of Non-Directed Orders 8.70	Orders 12	of Non-Directed Orders	Other Orders(%)	Paid/Received for	Paid/Received for Market	Paid/Received for	Paid/Received for Marketable Limit	Paid/Received for	Paid/Received for Non-Marketable	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 69  Venues	Orders as % of All Orders 100.00	Orders 49 Non-Directed	of Non-Directed Orders 71.01	Limit Orders 2	Orders as % of Non-Directed Orders 2.90	6	Limit Orders as % of Non-Directed Orders 8.70 8.70 Non-Marketable Limit Orders	Non-Marketable	of Non-Directed Orders 17.39		Paid/Received for Market	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders 69  Venues  Venue - Non- directed Order Flow VIRTU Americas, LLC(NITE) Citadel Securities	Orders as % of All Orders 100.00 Non-Directed Orders	Non-Directed Orders(%)	of Non-Directed Orders 71.01 Market Orders 21	Limit Orders 2 Market Orders(%) 42.86	Orders as % of Non-Directed Orders  2.90  Marketable Limit Orders	6  Marketable Limit Orders(%)  50.00	Limit Orders as % of Non-Directed Orders 8.70  8.70  Non-Marketable Limit Orders 2	Non-Marketable Limit Orders(%)	of Non-Directed Orders 17.39	Other Orders(%)	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders 69  Venues  Venue - Non-directed Order Flow VIRTU Americas, LLC(NITE)	Orders as % of All Orders 100.00	Non-Directed Orders(%)	of Non-Directed Orders 71.01 Market Orders 21	Limit Orders  2  Market Orders(%)  42.86	Orders as % of Non-Directed Orders  2.90  Marketable Limit Orders	6  Marketable Limit Orders(%)	Limit Orders as % of Non-Directed Orders 8.70  8.70  Non-Marketable Limit Orders 2	Non-Marketable	of Non-Directed Orders 17.39	Other Orders(%)	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders 69  Venues  Venue - Non- directed Order Flow VIRTU Americas, LLC(NITE) Citadel Securities	Orders as % of All Orders 100.00 Non-Directed Orders	Non-Directed Orders(%)	of Non-Directed Orders 71.01 Market Orders 21	Limit Orders 2 Market Orders(%) 42.86	Orders as % of Non-Directed Orders  2.90  Marketable Limit Orders	6  Marketable Limit Orders(%)  50.00	Limit Orders as % of Non-Directed Orders 8.70  8.70  Non-Marketable Limit Orders 2	Non-Marketable Limit Orders(%)	of Non-Directed Orders 17.39	Other Orders(%)	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 69  Venues 9  Venue - Non-directed Order Flow VIRTU Americas, LLC(NITS) Citadel Securities LLC(CORG)	Orders as % of All Orders 100.00 Non-Directed Orders	Non-Directed Orders(%) 47.30	of Non-Directed Orders 71.01 71.01 Market Orders 21 13	Limit Orders   2	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders  1	6  Marketable Limit Orders(%)  50.00	Limit Orders as % of Non-Directed Orders 8.70  Non-Marketable Limit Orders 2  0	Non-Marketable Limit Orders(%)	of Non-Directed Orders 17.39	Other Orders(%)	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders 69  Venues  Venue - Non-directed Order Flow VIRTU Americas, LUC(NITE) Citadel Securities LUC(CORG) JANE STREET CAPITAL, LUC(JIST) Clobe EDGX US	Orders as % of All Orders  100.00  Non-Directed Orders  35	Non-Directed Orders(%) 47.30	of Non-Directed Orders 71.01 71.01 Market Orders 21 13	Limit Orders   2	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders  1	Marketable Limit Orders(%)  50.00	Limit Orders as % of Non-Directed Orders 8.70  Non-Marketable Limit Orders 2  0	Non-Marketable Limit Orders(%) 18.18	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.33	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 69  Venues 9  Venue - Non-directed Order Flow VIRTU Americas, LLC(NITS) Citadel Securities LLC(CORG)  JANE STREET CAPITAL, LLC(JINST) Choe EDGX US Equities	Orders as % of All Orders  100.00  Non-Directed Orders  35	Non-Directed Orders(%) 47.30 20.27	of Non-Directed Orders 71.01 71.01 Market Orders 21 13	Limit Orders   2	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders  1	Marketable Limit Orders(%)  50.00  50.00	Limit Orders as % of Non-Directed Orders 8.70  Non-Marketable Limit Orders 2  0 0	12   Non-Marketable   Limit Orders(%)   18.18   0.00   0.00	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.33	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders 69  Venues  Venue - Non-directed Order Flow VIRTU Americas, LUC(NITE) Citadel Securities LUC(CORG) JANE STREET CAPITAL, LUC(JIST) Clobe EDGX US	Orders as % of All Orders  100.00  Non-Directed Orders  35	Non-Directed Orders(%) 47.30	of Non-Directed Orders 71.01 71.01 Market Orders 21 13	Limit Orders   2	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders  1	Marketable Limit Orders(%)  50.00	Limit Orders as % of Non-Directed Orders 8.70  Non-Marketable Limit Orders 2  0 0	Non-Marketable Limit Orders(%) 18.18	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.33	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders 69  Venues  Venue - Non-directed Order Flow VIRTU Americas, LLC(NITE) Citadel Securities LLC(CORG) JANE STREET CAPITAL, LLC(JNST) Cobe EQGX US Equities Exchange(EDGX)	Orders as % of All Orders  100.00  Non-Directed Orders  35	Non-Directed Orders(%) 47.30 20.27	of Non-Directed Orders 71.01 71.01 Market Orders 21 13	Limit Orders   2	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders  1	Marketable Limit Orders(%)  50.00  50.00	Limit Orders as % of Non-Directed Orders 8.70  Non-Marketable Limit Orders 2  0 0	12   Non-Marketable   Limit Orders(%)   18.18   0.00   0.00	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.33	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 69  Venues 69  Venue - Non-directed Order Flow VIRTU Americas, LLC(NITE) 120 (Citadel Securities LLC(DORG) 130 ANS STAR Equities Exchange (EDGX US Exchange (EDGX)	Orders as % of All Orders  100.00  Non-Directed Orders  35	Non-Directed   Orders(%)   47.30   20.27   17.57	of Non-Directed Orders 71.01 71.01 Market Orders 21 13	Market Orders(%) 42.86 26.53 26.53	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders 1  1 0 0	Marketable Limit Orders(%)  50.00  0.00	Limit Orders as % of Non-Directed Orders 8.70  Non-Marketable Limit Orders 2  0 0 3	Non-Marketable   Limit Orders(%)   18.18   0.00   0.00   27.27	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.33 0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders 69  Venues  Venue - Non-directed Order Flow VIRTU Americas, LLC(NITE) LLC(NITE) LLC(NITE) CTRadel Securities LLC(CORG) JANE STREET CAPITAL, LLC(JINST) Choe EDGX US Exchange(EDGX)  NASDAQ Execution Services, LLC(NSDQ) NYSE Arra[ARCA]	Orders as % of All Orders  100.00  Non-Directed Orders  35	Non-Directed Orders(%) 47.30 20.27	of Non-Directed Orders 71.01 Market Orders 21 13 0 0 0	Limit Orders   2	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders 1  1 0 0	Marketable Limit Orders(%)  50.00  50.00	Limit Orders as % of Non-Directed Orders 8.70  Non-Marketable Limit Orders 2  0 0 3	12   Non-Marketable   Limit Orders(%)   18.18   0.00   0.00	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.33	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders  69  Venues  Venue - Non-directed Order Flow VIRTU Americas, LUC(NTE)  ILC(DIRE)  JANE STREET CAPITAL, LLC(LINT)  JANE STREET CAPITAL, LLC(LINT) Clobe EDGX US Equities Exchange(EDGX)  NYSE Arca[ARCA] NYSE Arca[ARCA] NYSE Arca[ARCA] Of E Execution	Orders as % of All Orders  100.00  Non-Directed Orders  35	Non-Directed   Orders(%)	of Non-Directed Orders 71.01 Market Orders 21 13 0 0 0	Market Orders(%) 42.86 26.53 20.00	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders 1  1 0 0	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00	Limit Orders as % of Non-Directed Orders 8.70  Non-Marketable Limit Orders 2  0 0 3	Non-Marketable Limit Orders(%)   18.18   0.00   0.00   27.27   27.27	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.33 0.00 0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Total Non-Directed Orders 69  Venues 69  Venue Non-directed Order Flow VIRTU Americas, LLC(NUTE)  LLC(NUTE)  LLC(DRG)  JANE STREET CAPITAL, LLC(JINST)  Choe EDGX US Exchange(EDGX)  NASDAQ Execution Services, LLC(NSDQ)  NYSE Arca[ARCA]  GI Execution Services,	Orders as % of All Orders  100.00  Non-Directed Orders  35	Mon-Directed   Orders	of Non-Directed Orders 71.01 Market Orders 21 13 0 0 0	Market Orders(%)  42.86  26.53  0.00  0.00  0.00	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders 1  1 0 0	Marketable Limit Orders(%)  50.00  0.00  0.00  0.00	Limit Orders as % of Non-Directed Orders 8.70  Non-Marketable Limit Orders 2  0 0 3 3 2	Non-Marketable   Limit Orders   12	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.33 0.00 0.00 0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders  69  Venues  Venue - Non-directed Order Flow VIRTU Americas, LUC(INTE)  LUC(INTE)  JANE STREET CAPITAL, LUC(JONTE)  JANE STREET CAPITAL  JANE STREET CAPITAL  JANE STREET  CAPITAL  JANE STREET  CAPITAL  JANE STREET  CAPITAL  JANE STREET  CAPITAL  JANE STREET  CAPITAL  JANE STREET  CAPITAL  JANE STREET  CAPITAL  JANE STREET  CAPITAL  JANE STREET  CAPITAL  JANE STREET  CAPITAL  JANE STREET  CAPITAL  JANE STREET  CAPITAL  JANE	Orders as % of All Orders  100.00  Non-Directed Orders  35	Non-Directed   Orders(%)   47.30   20.27   17.57   4.05   2.70   1.35	of Non-Directed Orders 71.01 Market Orders 21 13 0 0 0	Market Orders(%)  42.86  26.53  0.00  0.00  2.04	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders 1  1 0 0	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00	Limit Orders as % of Non-Directed Orders 8.70  Non-Marketable Limit Orders 2  0 0 3 3 2	Non-Marketable Limit Orders(%)   18.18   0.00   0.00   27.27   27.27	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.33 0.00 0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders  69  Venues  Venue - Non-directed Order Flow VIRTU Americas, LLC(INTF)  LIC(DIRT)  JANE STREET CAPITAL, LLC(JNST)  JANE STREET CAPITAL, LLC(JNST)  NASDAQ Execution Services, LLC(RSDQ) NYSE ARCA[ARCA] Of E Execution Services, LLC(ETMM) New York Stock Exchange(Flox)	Orders as % of All Orders  100.00  Non-Directed Orders  35	Mon-Directed   Orders	of Non-Directed Orders 71.01 Market Orders 21 13 0 0 0	Market Orders(%)  42.86  26.53  0.00  0.00  0.00	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders 1  1 0 0	Marketable Limit Orders(%)  50.00  0.00  0.00  0.00	Non-Marketable Limit Orders as % of Non-Directed Orders  8.70  Non-Marketable Limit Orders  2  0  3  3  2	Non-Marketable   Limit Orders   12	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.33 0.00 0.00 0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders  69  Venues  Venue - Non-directed Order Flow WIRTU Americas, LLC(NITE)  Citadel Securities  LLC(CDRG)  ANE STREET CAPITAL, LLC(INST)  Choe EDGX US Equities  Exchange(EDGX)  NASDAQ Execution  Services, LLC(INST)  Of Execution  Services, LLC(INST)  GENERAL LLC(INST)  NEW York Stock  Exchange(INYSE)	Orders as % of All Orders  100.00  Non-Directed Orders  35	Non-Directed   Orders(%)   47.30   20.27   17.57   4.05   2.70   1.35	of Non-Directed Orders 71.01 Market Orders 21 13 0 0 0	Market Orders(%)  42.86  26.53  0.00  0.00  2.04	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders 1  1 0 0	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00  0.00	Non-Marketable Limit Orders as % of Non-Directed Orders  8.70  Non-Marketable Limit Orders  2  0  3  3  2	Non-Marketable   Limit Orders(%)	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.33 0.00 0.00 0.00 0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders  69  Venues  Venue - Non-directed Order Flow VIRTU Americas, LUCINTS  Citadel Securities LUC(DRG)  JANE STREET CAPITAL, LUC(JINT)  JANE STREET CAPITAL, LUC(JINT)  JOBOE BOSK US  Equities  Exchange(EDGX)  NYSE ARCA[ARCA]  OF LENCUTION  Services, LUC(SNDQ)  NYSE ARCA[ARCA]  NEW YOR'S Stock  Exchange(INSDQ)  New York Stock  Exchange(INSDQ)  New York Stock  Exchange(INSDQ)  New York Stock  Exchange(INSDQ)  Two Sigma  Securities,	Orders as % of All Orders  100.00  Non-Directed Orders  35	Non-Directed   Orders(%)   47 300   17 57   17 57   4.05   2.70   1.35	of Non-Directed Orders 71.01 Market Orders 21 13 0 0 0	Market Orders(%) 42.86 26.53 26.53 0.00 0.00 0.00	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders 1  1  0  0  0  0 0	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00  0.00	Non-Marketable Limit Orders as % of Non-Directed Orders  8.70  Non-Marketable Limit Orders  2  0  0  1	Non-Marketable   Limit Orders(%)	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.33 0.00 0.00 0.00 0.00	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders  69  Venues  Venue - Non-directed Order Flow WIRTU Americas, LLC(NITE)  Citadel Securities  LLC(CDRG)  ANE STREET CAPITAL, LLC(INST)  Choe EDGX US Equities  Exchange(EDGX)  NASDAQ Execution  Services, LLC(INST)  Of Execution  Services, LLC(INST)  GENERAL LLC(INST)  NEW York Stock  Exchange(INYSE)	Orders as % of All Orders  100.00  Non-Directed Orders  35	Non-Directed   Orders(%)   47.30   20.27   17.57   4.05   2.70   1.35	of Non-Directed Orders 71.01 Market Orders 21 13 0 0 0	Market Orders(%)  42.86  26.53  0.00  0.00  2.04	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders 1  1  0  0  0  0 0	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00  0.00  0.00  0.00	Non-Marketable Limit Orders as % of Non-Directed Orders  8.70  Non-Marketable Limit Orders  2  0  0  1	Non-Marketable   Limit Orders(%)	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.333 0.000 0.000 0.000 0.000	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders  69  Venues  Venue - Non-directed Order Flow VIRTU Americas, LLC(NITE)  Citadel Securities  LLC(CDRG)  AME STREET CAPITAL, LLC(INST)  Choe EDGX US  Equities  Exchange(EDGX)  NASDAQ Execution  Services, LLC(SPG)  NYSE Arca[ARCA]  GI Execution  Services, LLC(EMM)  New York Stock  Exchange(NYSE)  Exchange(NYSE)  Two Sigma  Securities,  LLC(SOHO)	Orders as % of All Orders  100.00  Non-Directed Orders  35	Non-Directed   Orders(%)   47 300   17 57   17 57   4.05   2.70   1.35	of Non-Directed Orders 71.01 Market Orders 21 13 0 0 0	Market Orders(%) 42.86 26.53 26.53 0.00 0.00 0.00	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders 1  1  0  0  0  0 0	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00  0.00  0.00  0.00	Non-Marketable Limit Orders as % of Non-Directed Orders  8.70  Non-Marketable Limit Orders  2  0  0  1	Non-Marketable   Limit Orders(%)	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.333 0.000 0.000 0.000 0.000	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders  69  Venues  Venue - Non-directed Order Flow VIRTU Americas, LIC(INTE)  Citadel Securities  LLC(CDRG)  JANE STREET  CAPITAL, LLC(JNST)  JANE STREET  CAPITAL, LLC(JNST)  Services, LLC(RSDQ)  NYSE Arca[ARCA]  GE Execution  Services, LLC(ETMM)  New York Stock  Exchange(FOS)  Two Sigma  Securities,	Orders as % of All Orders  100.00  Non-Directed Orders  35	Non-Directed   Orders(%)   47 300   17 57   17 57   4.05   2.70   1.35	of Non-Directed Orders 71.01 Market Orders 21 13 0 0 0	Market Orders(%) 42.86 26.53 26.53 0.00 0.00 0.00	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders 1  1  0  0  0  0 0	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00  0.00  0.00  0.00	Non-Marketable Limit Orders as % of Non-Directed Orders  8.70  Non-Marketable Limit Orders  2  0  0  1	Non-Marketable   Limit Orders(%)	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.333 0.000 0.000 0.000 0.000	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders  69  Venues  Venue - Non-directed Order Flow WIRTU Americas, LLC(NITE)  Citadel Securities  LLC(CDRG)  ANE STREET CAPITAL, LLC(INST)  Choe EDGX US  Equities  Exchange(EDGX)  NASDAQ Execution  Services, LLC(NEDG)  NYSE Arca[ARCA]  GI Execution  Services, LLC(EMG)  LLC(EMM)  NEW York Stock  Exchange(NYSE)  Exchange(NYSE)  LLC(SOHO)	Orders as % of All Orders  100.00  Non-Directed Orders  35	Non-Directed   Orders(%)   47 300   17 57   17 57   4.05   2.70   1.35	of Non-Directed Orders 71.01 Market Orders 21 13 0 0 0	Market Orders(%) 42.86 26.53 26.53 0.00 0.00 0.00	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders 1  1  0  0  0  0 0	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00  0.00  0.00  0.00	Non-Marketable Limit Orders as % of Non-Directed Orders  8.70  Non-Marketable Limit Orders  2  0  0  1	Non-Marketable   Limit Orders(%)	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.333 0.000 0.000 0.000 0.000	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred
Summary  Total Non-Directed Orders  69  Venues  Venue - Non- directed Order Flow VIRTU Americas, LLC(DRT)  Citadel Securities LLC(CORG)  ANA STREET CAPITAL, LLC(INST) Choe E DOSK US Equities Exchange(EDGX)  NASDAQ Execution Services, LLC(NSDQ) GI Execution Services, LLC(EVM)  Services, LLC(EVM)  Services, LLC(EVM)  Services, LLC(EVM)  Services, LLC(EVM)  Services, LLC(EVM)  Securities, LLC(EVM)  December 2021	Orders as % of All Orders  100.00  Non-Directed Orders  35	Non-Directed   Orders(%)   47 300   17 57   17 57   4.05   2.70   1.35	of Non-Directed Orders 71.01 Market Orders 21 13 0 0 0	Market Orders(%) 42.86 26.53 26.53 0.00 0.00 0.00	Orders as % of Non-Directed Orders 2.90  Marketable Limit Orders 1  1  0  0  0  0 0	Marketable Limit Orders(%)  50.00  50.00  0.00  0.00  0.00  0.00  0.00	Non-Marketable Limit Orders as % of Non-Directed Orders  8.70  Non-Marketable Limit Orders  2  0  0  1	Non-Marketable   Limit Orders(%)	of Non-Directed Orders 17.39	Other Orders(%) 91.67 8.333 0.000 0.000 0.000 0.000	Paid/Received for Market Orders(USD)	Paid/Received for Market Orders(cents per	Paid/Received for Marketable Limit	Paid/Received for Marketable Limit Orders(cents per	Paid/Received for Non-Marketable	Paid/Received for Non-Marketable Limit Orders(cents	Paid/Received for	Paid/Received for Other Orders(cents per hundred

					Marketable Limit		Non-Marketable											
	Non-Directed		Market Orders as %		Orders as % of		Limit Orders as %		Other Orders as %									
Total Non-Directed	Orders as % of All	Total Market	of Non-Directed	Total Marketable	Non-Directed		of Non-Directed	Total Other	of Non-Directed									
Orders	Orders	Orders	Orders	Limit Orders	Orders	Total Non-Marketable Limit Orders	Orders	Orders	Orders									
0	0.00	0	0.00	0	0.00	0	0.00	0	0.00									
Venues																		
												Net Payment		Net Payment		Net Payment		Net Payment
											Net Payment	Paid/Received for	Net Payment	Paid/Received for	Net Payment	Paid/Received for		Paid/Received for
											Paid/Received for	Market	Paid/Received for	Marketable Limit	Paid/Received for	Non-Marketable	Net Payment	Other Orders(cents
Venue - Non-	Non-Directed	Non-Directed			Marketable Limit		Non-Marketable	Non-Marketable			Market	Orders(cents per	Marketable Limit	Orders(cents per	Non-Marketable	Limit Orders(cents	Paid/Received for	per hundred
directed Order Flow	Orders	Orders(%)	Market Orders	Market Orders(%)	Orders	Marketable Limit Orders(%)	Limit Orders	Limit Orders(%)	Other Orders	Other Orders(%)	Orders(USD)	hundred shares)	Orders(USD)	hundred shares)	Limit Orders(USD)	per hundred shares)	Other Orders(USD)	shares)