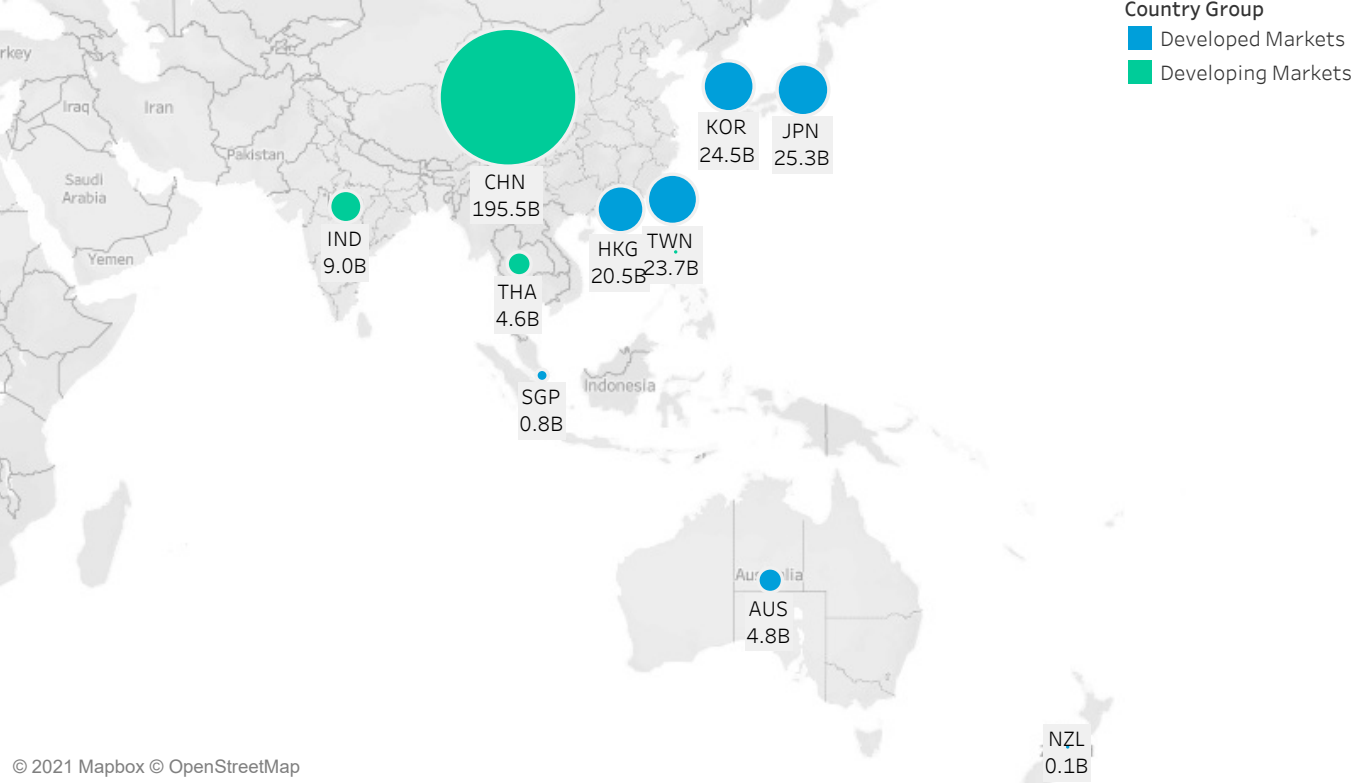


**July 2021**  
**APAC Market Structure Monthly**

**Average Daily Turnover (Notional USD)**



**Country Breakdowns**

**Hong Kong**

**China**

**Japan**

**Australia**

**South Korea**

**Taiwan**

**India**

**Thailand**

**New Zealand**

**Singapore**

# July 2021

## APAC Market Structure Monthly

### MICROSTRUCTURE OBSERVATIONS

- India, Thailand, Korea, Japan, Australia saw turnover decline in July, whereas China and Hong Kong's turnover increased by 20% and 34% MoM respectively.
- Historical high monthly turnover recorded in Taiwan, turnover for 5-10% ADV trades in large cap Taiwanese names increased 95% MoM.
- Intraday spreads and volatility across most APAC-based countries remained consistent MoM. In Hong Kong, intraday spread and volatility increased throughout the trading day, with one-minute volatility at first hour of trading day increasing over 36% MoM.

### APAC MARKET STRUCTURE NEWS

#### **Hong Kong Stock Stamp Duty Increase Effective on 1 August 2021**

Under the Hong Kong government's recently published "Revenue (Stamp Duty) Bill 2021", the rate of stamp duty payable on contract notes for the sale or purchase of Hong Kong stocks (not being jobbing business) increased from 0.10% to 0.13%, as a percentage of transaction value. The new rate went into effect on trading day, 1 August 2021.

[https://www.hkex.com.hk/-/media/HKEX-Market/Services/Circulars-and-Notices/Participant-and-Members-Circulars/SEHK/2021/ce\\_SEHK\\_CT\\_080\\_2021.pdf](https://www.hkex.com.hk/-/media/HKEX-Market/Services/Circulars-and-Notices/Participant-and-Members-Circulars/SEHK/2021/ce_SEHK_CT_080_2021.pdf)

#### **Hong Kong Exchanges and Clearing Limited Introduces New Settlement Platforms for Northbound China Stock Connect and IPOs**

Hong Kong Exchanges and Clearing Limited (HKEX) announced the first group of participants to pilot Synaspe, HKEX's new Stock Connect settlement acceleration platform. In collaboration with The Depository Trust & Clearing Corporation (DTCC), Synaspe aims to standardize and streamline post-trade workflows of Northbound Stock Connect users, while maximizing efficiencies for market participants. The Synaspe platform is targeting production in 1Q 2022.

On 6 July 2021, HKEX introduced Fast Interface for New Issuance (FINI), a new platform that aims to streamline and digitalize Hong Kong's IPO settlement process. The launch follows a November 2020 FINI conclusion paper that showed industry support.

[https://www.hkex.com.hk/News/News-Release/2021/210706news?sc\\_lang=en](https://www.hkex.com.hk/News/News-Release/2021/210706news?sc_lang=en)

FINI concept paper conclusions:

[https://www.hkex.com.hk/-/media/HKEX-Market/Services/Next-Generation-Post-Trade-Programme/Fini/FINI-Conclusions-Paper-EN-\(Publication\).pdf?la=en](https://www.hkex.com.hk/-/media/HKEX-Market/Services/Next-Generation-Post-Trade-Programme/Fini/FINI-Conclusions-Paper-EN-(Publication).pdf?la=en)

[https://www.hkex.com.hk/News/News-Release/2021/2106285news?sc\\_lang=en](https://www.hkex.com.hk/News/News-Release/2021/2106285news?sc_lang=en)

## China Proposes Cybersecurity Review on Foreign Tech IPOs

On 10 July, following Beijing's crackdown on Didi, the countries' leading ride-hailing platform, China proposed a new cybersecurity review for all companies who seek to list in foreign countries. According to the Cyberspace Administration of China, the review will apply to companies holding data on more than one million users and aims to assess potential national security risks, with the goal of mitigating the potential malicious use of data and personal information by foreign governments.

<https://www.bloomberg.com/news/articles/2021-07-10/china-tightens-foreign-ipo-rules-for-firms-with-large-user-data>

## Korea Exchange Launches Three New Climate Change Indices

In line with growing interest in Environmental, Social, and Governance (ESG) investments and climate change, the Korean Exchange (KRX) launched three new KRX Climate Change Indices on 19 July: KOSPI 200 Climate Change Index, KRX 300 Climate Change Index and KRX Climate Change Solutions Index.

KOSPI 200 Climate Change Index and KOSPI 300 Climate Change Index is calculated by applying MSCI's low-carbon transition score to KOSPI 200 and KRX 300 respectively to increase the weight of constituent companies that have an outstanding response to climate change. Similarly, the KRX Climate Change Solutions Index is comprised of a total of 40 constituents who are selected based on MSCI's Climate Change Metrics and include 20 high ranking companies with a low-carbon transition score and 20 high ranking companies with low-carbon patent scoring.

According to source, investing in the KOSPI200 Climate Change Index results in a portfolio that emits 27% less carbon compared to investing in a similar basket of constituent stocks in KOSPI20

<https://global.krx.co.kr/contents/GLB/02/0203/0203000000/GLB0203000000.jsp#ab8758eced0475769e200e7e309baf77=1&view=20625>

To learn more, contact your sales representative or call our desk at: **APAC** +852.2846.3592 | **CAN** +1.416.874.0800 | **EMEA** +44.20.7670.4066 | **US** +1.646.682.6199

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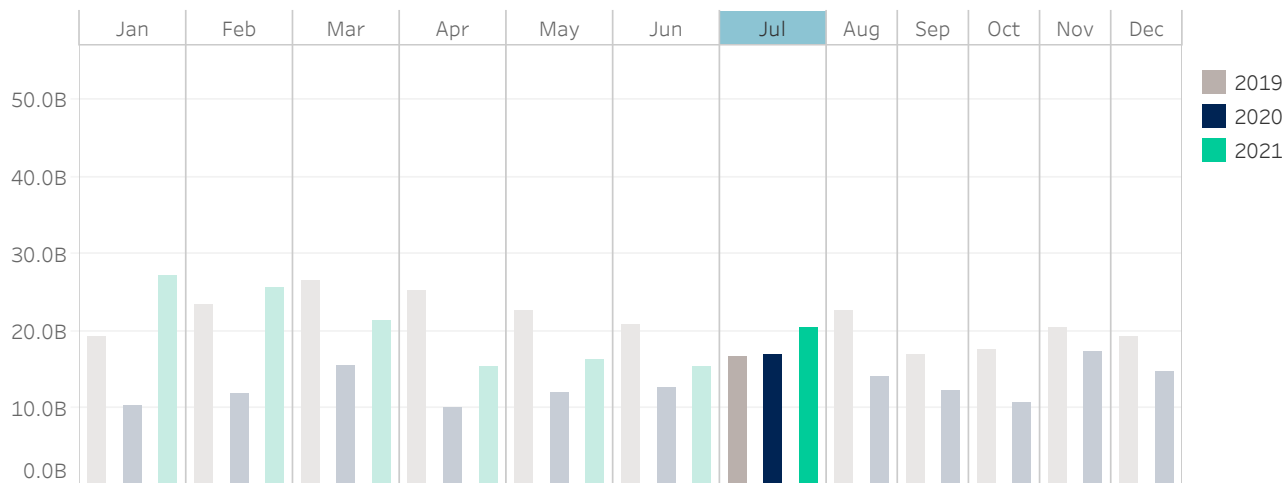
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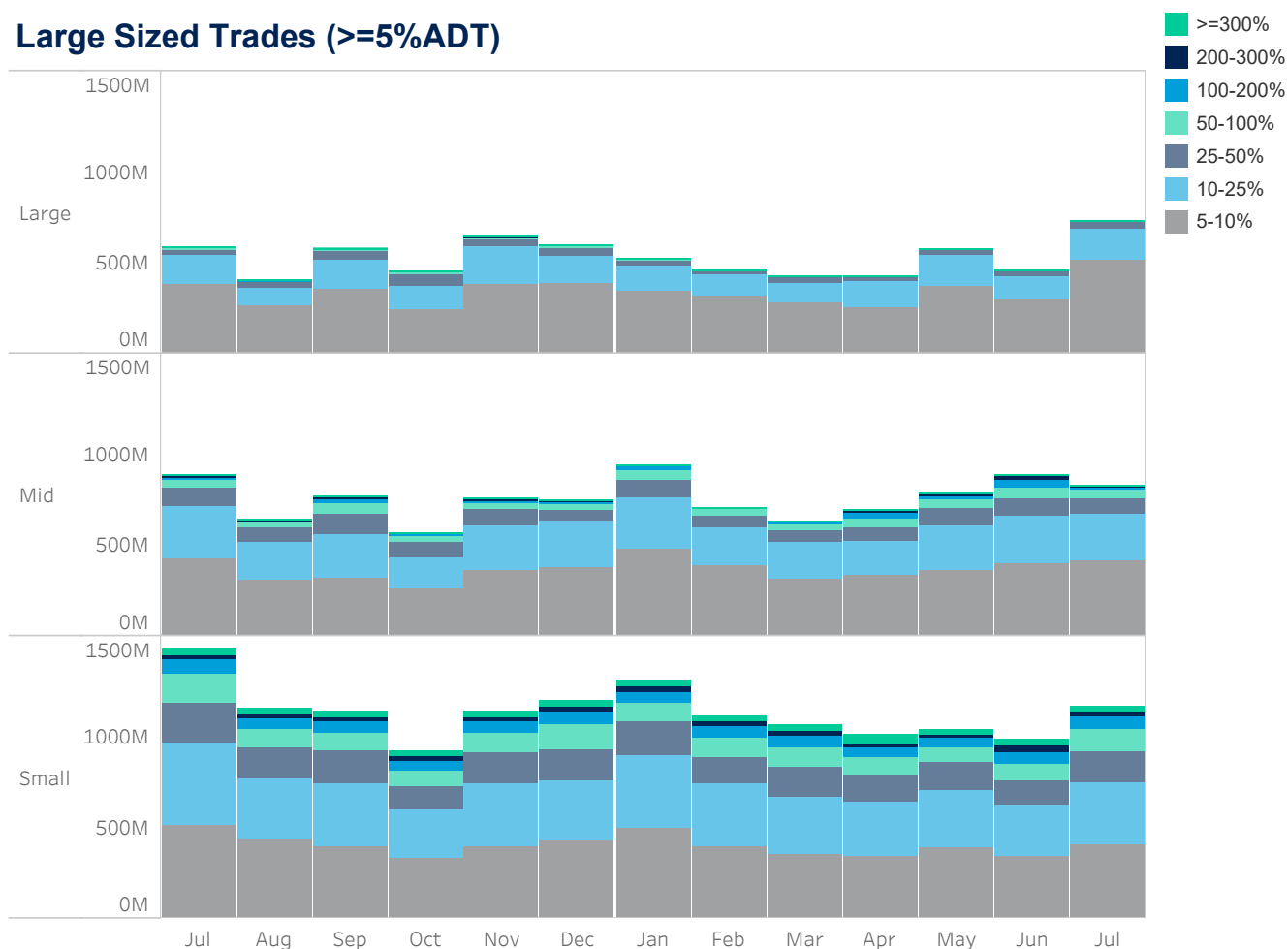


# Hong Kong

## Average Daily Turnover (Notional USD)



## Large Sized Trades (>=5%ADT)

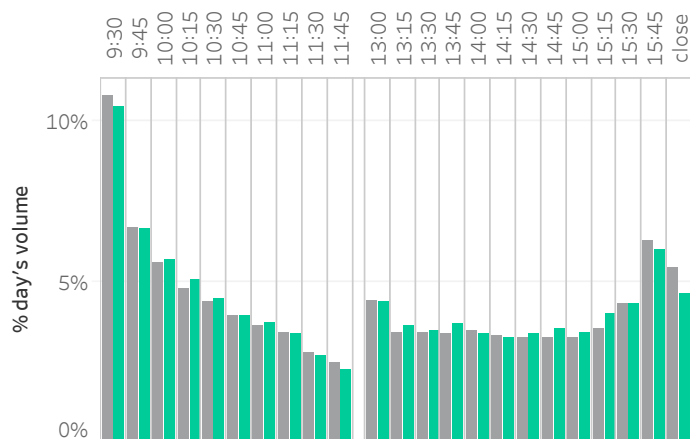


Source data: Virtu Financial

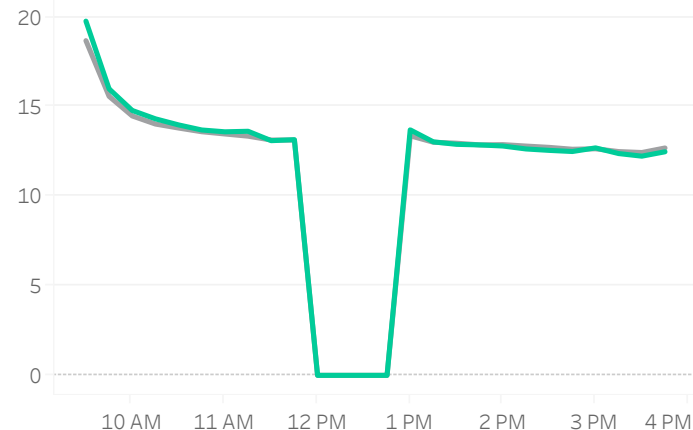


# Hong Kong

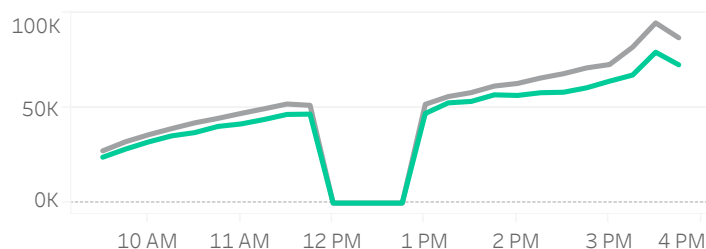
## Volume Curve



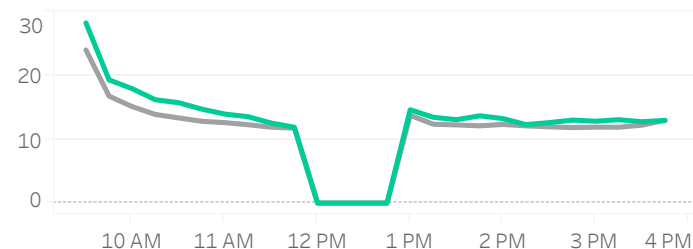
## Intraday Spread (bps)



## Intraday Quotesize (Shares)



## Intraday Volatility (bps)



■ Rolling 12 Months Avg ■ July 2021

## Spread Bps

	20 Q4			21 Q1			21 Q2			21 Q3
	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21
firstHalfHour	17.3	16.8	16.2	16.9	16.6	16.9	15.8	15.4	15.6	16.9
midday	13.3	13.0	12.9	13.4	13.0	12.5	12.4	11.7	11.9	13.1
lastHalfHour	13.0	12.6	12.7	12.5	12.1	11.7	11.7	11.3	11.5	12.3

## One Minute Volatility Bps

firstHalfHour	11.6	13.6	12.1	17.6	16.8	18.5	12.2	11.8	11.6	15.8
midday	6.4	6.8	6.0	8.1	8.8	8.7	6.0	6.0	5.8	7.8
lastHalfHour	6.8	7.3	6.7	6.9	6.9	7.3	6.5	6.6	6.1	8.1

## Quotesize in Shares

firstHalfHour	29,429	35,285	28,860	29,369	28,259	24,138	24,880	28,539	27,890	26,823
midday	59,646	67,190	59,993	52,420	49,671	39,835	49,281	59,450	57,843	49,961
lastHalfHour	92,522	112,401	93,657	80,787	82,321	70,652	79,757	92,195	85,221	76,912

Median used for all metrics

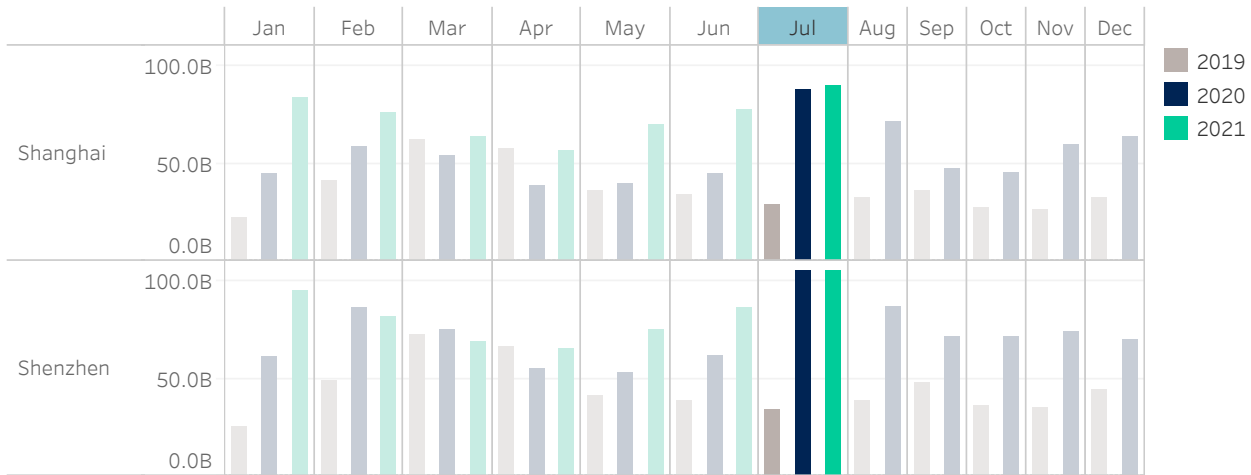
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

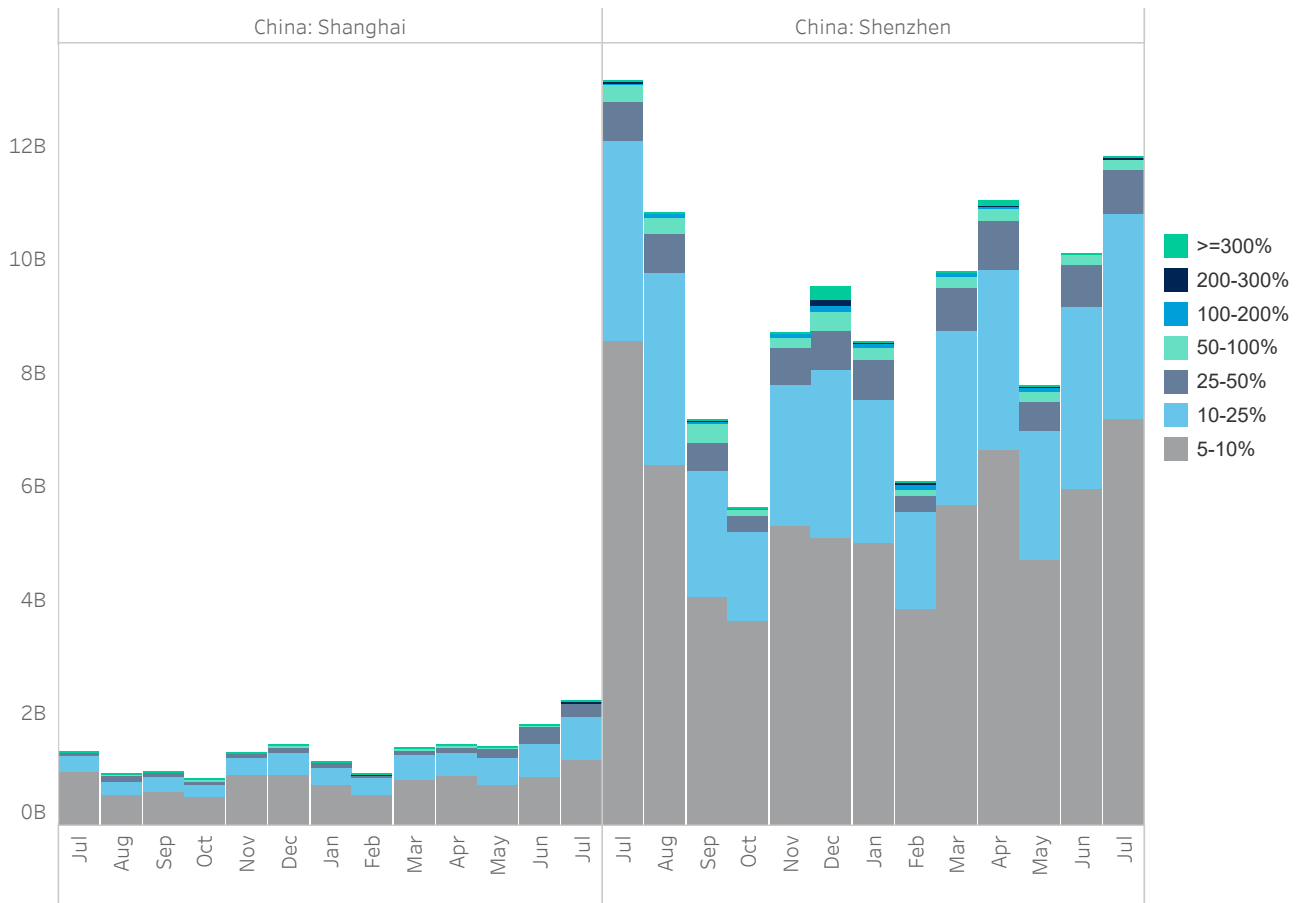


# China

## Average Daily Turnover (Notional USD)



## Large Sized Trades (>=5%ADT)

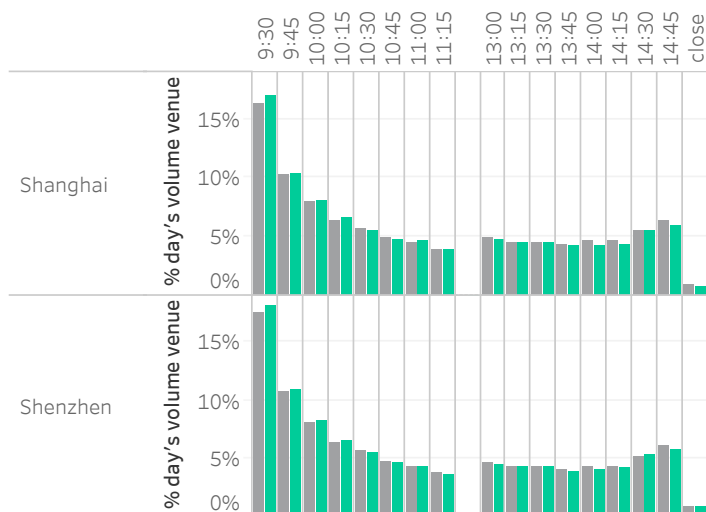


Source data: Virtu Financial

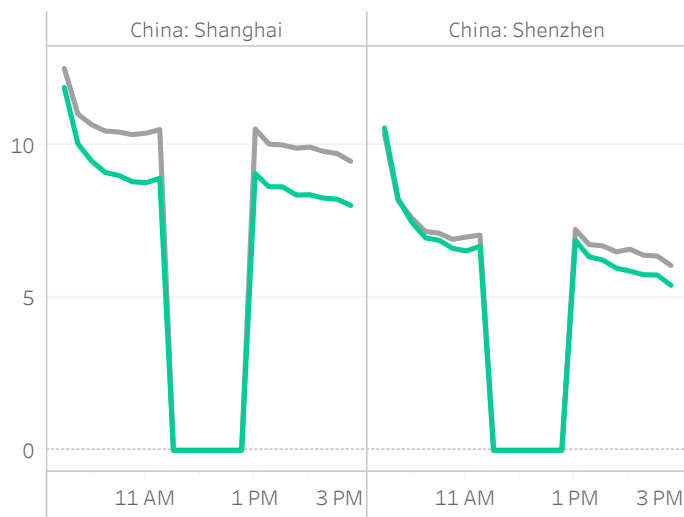


# China

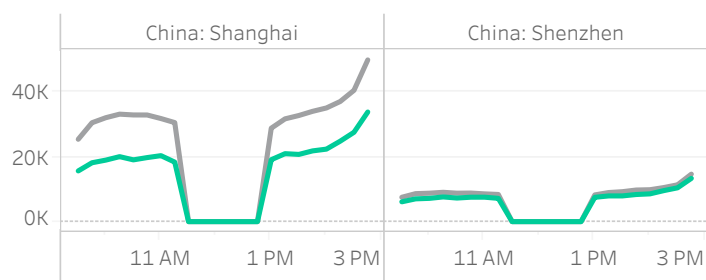
## Volume Curve



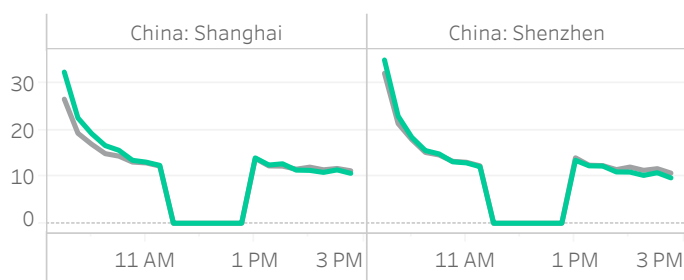
## Intraday Spread (bps)



## Intraday Quotesize (Shares)



## Intraday Volatility (bps)



■ Rolling 12 Months Avg ■ July 2021

## Spread Bps

	China: Shanghai							China: Shenzhen						
	21 Q1			21 Q2			21 Q3	21 Q1			21 Q2			21 Q3
	Jan	Feb	Mar	Apr	May	Jun	Jul	Jan	Feb	Mar	Apr	May	Jun	Jul
firstHalfHour	10.6	10.8	10.2	10.1	10.3	9.9	10.5	9.3	9.3	8.8	8.1	8.4	8.3	8.8
midday	9.2	9.5	9.1	9.0	9.1	8.5	8.6	7.0	7.1	6.7	6.4	6.5	6.1	6.4
lastHalfHour	8.6	8.9	8.5	8.5	8.6	8.0	7.8	6.1	6.2	5.9	5.6	5.6	5.3	5.4

## One Minute Volatility Bps

firstHalfHour	13.6	16.3	16.5	23.2	23.2	20.9	17.1	17.8	18.4	21.6	19.3	22.7	22.3	31.4	31.0	26.7	21.3	21.4	21.6	25.1
midday	5.9	7.4	8.0	11.6	11.4	9.5	7.0	7.8	8.0	9.2	9.6	11.2	11.0	15.0	14.7	12.2	9.1	9.5	9.5	11.1
lastHalfHour	5.7	6.6	7.5	9.7	9.6	7.9	6.3	6.3	6.5	7.7	8.3	8.8	9.0	12.0	12.2	9.5	7.5	7.5	7.5	8.2

## Quotesize in Shares

firstHalfHour	30K	31K	23K	19K	18K	18K	20K	22K	19K	17K	8K	8K	7K	7K	7K	6K	7K	8K	7K	7K
midday	33K	35K	26K	21K	20K	21K	25K	27K	23K	21K	9K	9K	8K	8K	7K	7K	8K	9K	8K	8K
lastHalfHour	44K	47K	36K	31K	29K	31K	37K	40K	34K	31K	12K	12K	12K	11K	10K	10K	13K	13K	12K	12K

Median used for all metrics

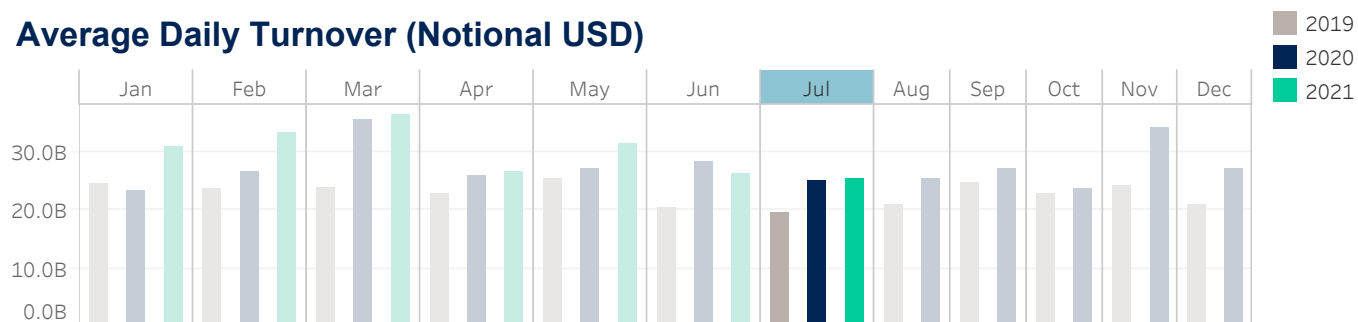
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

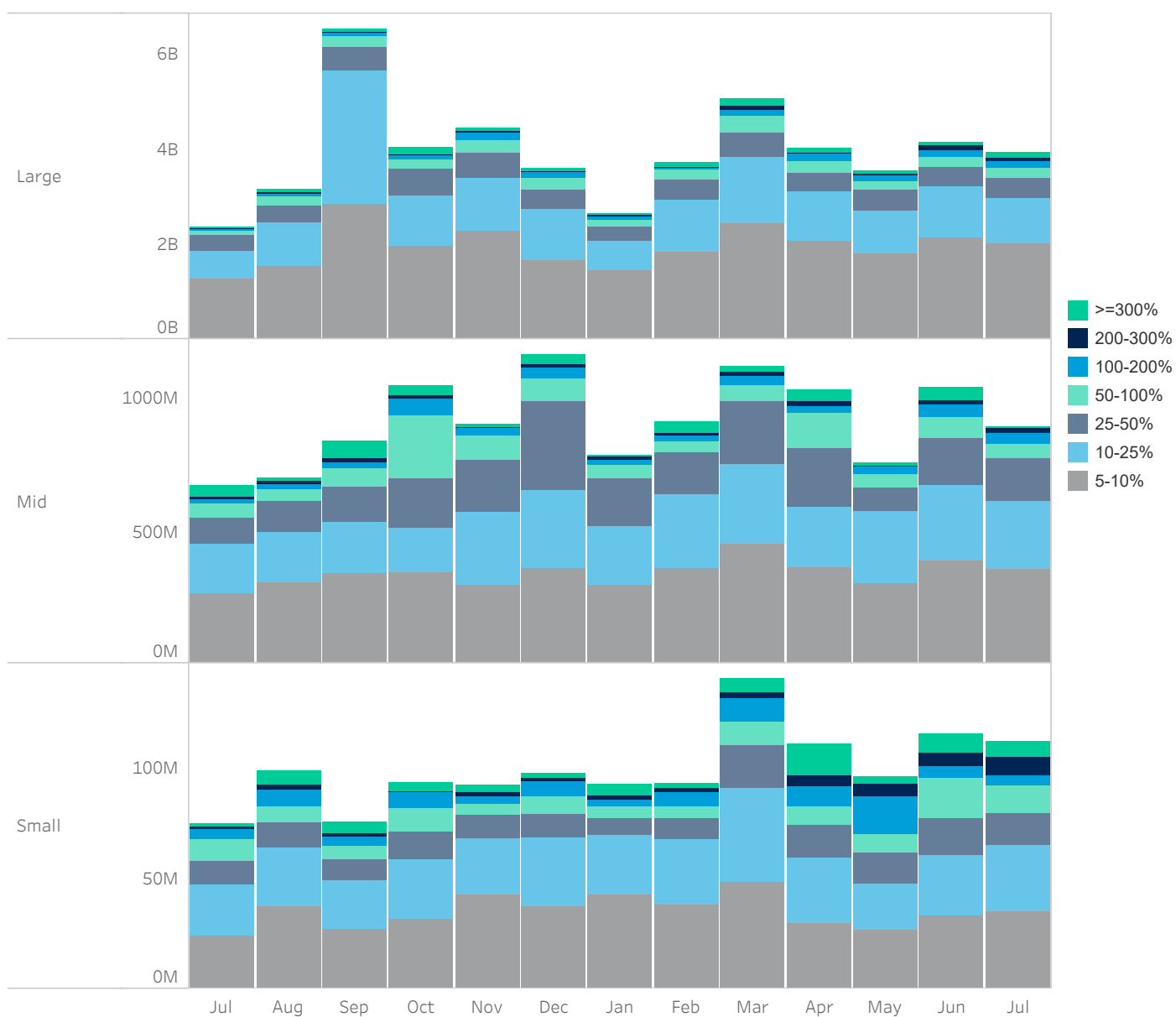


# Japan

## Average Daily Turnover (Notional USD)



## Large Sized Trades (>=5%ADT)



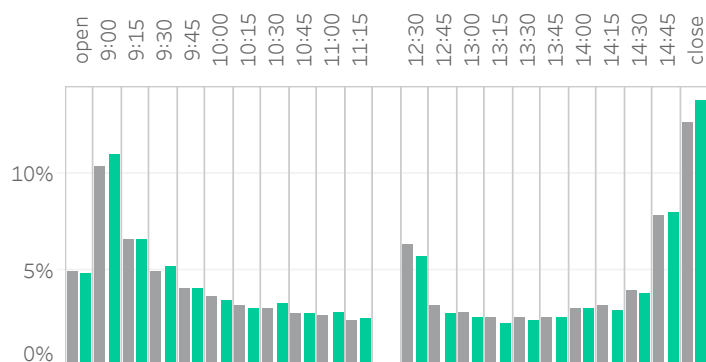
Source data: Virtu Financial



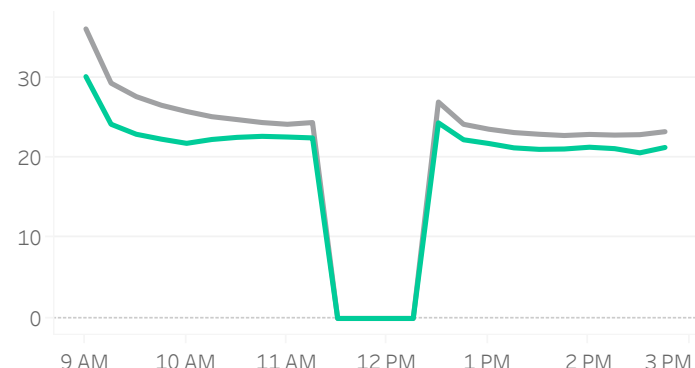


# Japan

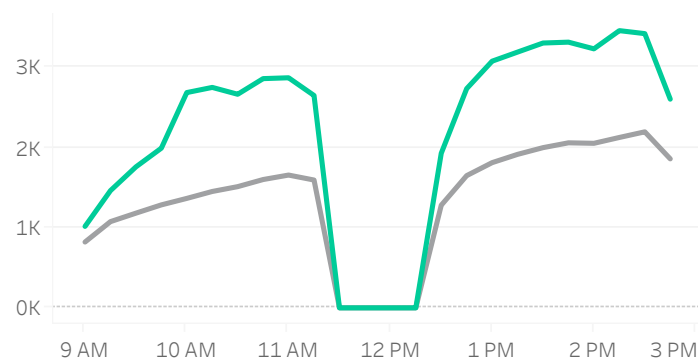
## Volume Curve



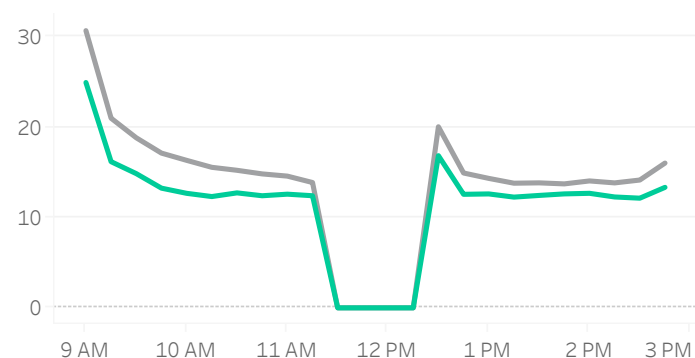
## Intraday Spread (bps)



## Intraday Quotesize (Shares)



## Intraday Volatility (bps)



■ Rolling 12 Months Avg ■ July 2021

## Spread Bps

	20 Q4			21 Q1			21 Q2			21 Q3
	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21
firstHalfHour	29.7	32.0	29.6	29.3	33.1	32.7	29.4	28.2	26.6	25.6
midday	23.2	24.1	23.2	22.9	24.6	24.8	22.9	21.7	21.0	20.7
lastHalfHour	22.1	23.4	21.9	21.7	22.6	22.5	21.1	20.5	19.8	19.6

## One Minute Volatility Bps

firstHalfHour	16.1	18.8	14.9	15.1	15.7	15.9	14.7	15.9	13.0	12.1
midday	6.8	7.8	6.6	6.8	6.5	6.9	6.3	6.8	5.9	6.2
lastHalfHour	7.0	7.3	6.9	7.3	6.7	6.6	6.5	7.0	6.5	11.5

## Quotesize in Shares

firstHalfHour	1,089	988	1,146	1,202	1,248	1,170	1,198	1,120	1,295	1,334
midday	1,940	1,774	2,092	2,260	2,167	1,921	2,163	2,147	2,573	2,700
lastHalfHour	2,548	2,214	2,693	2,814	2,559	2,177	2,622	2,582	3,165	3,218

Median used for all metrics

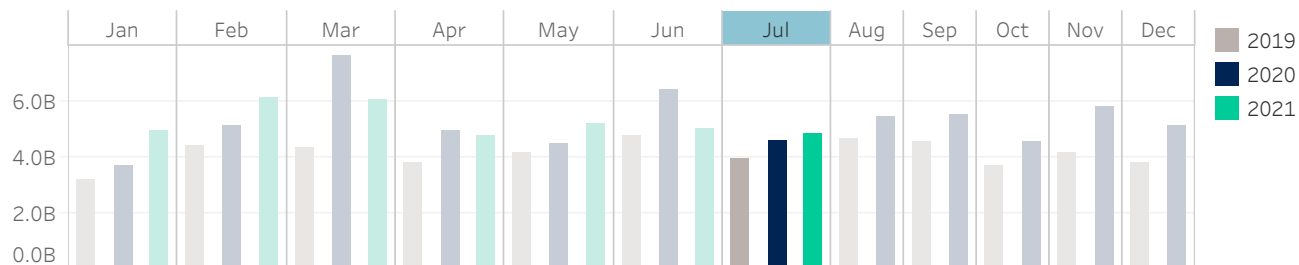
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

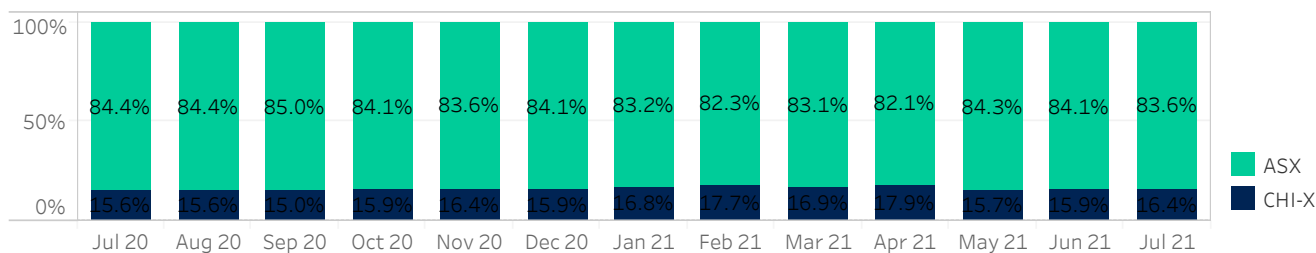


# Australia

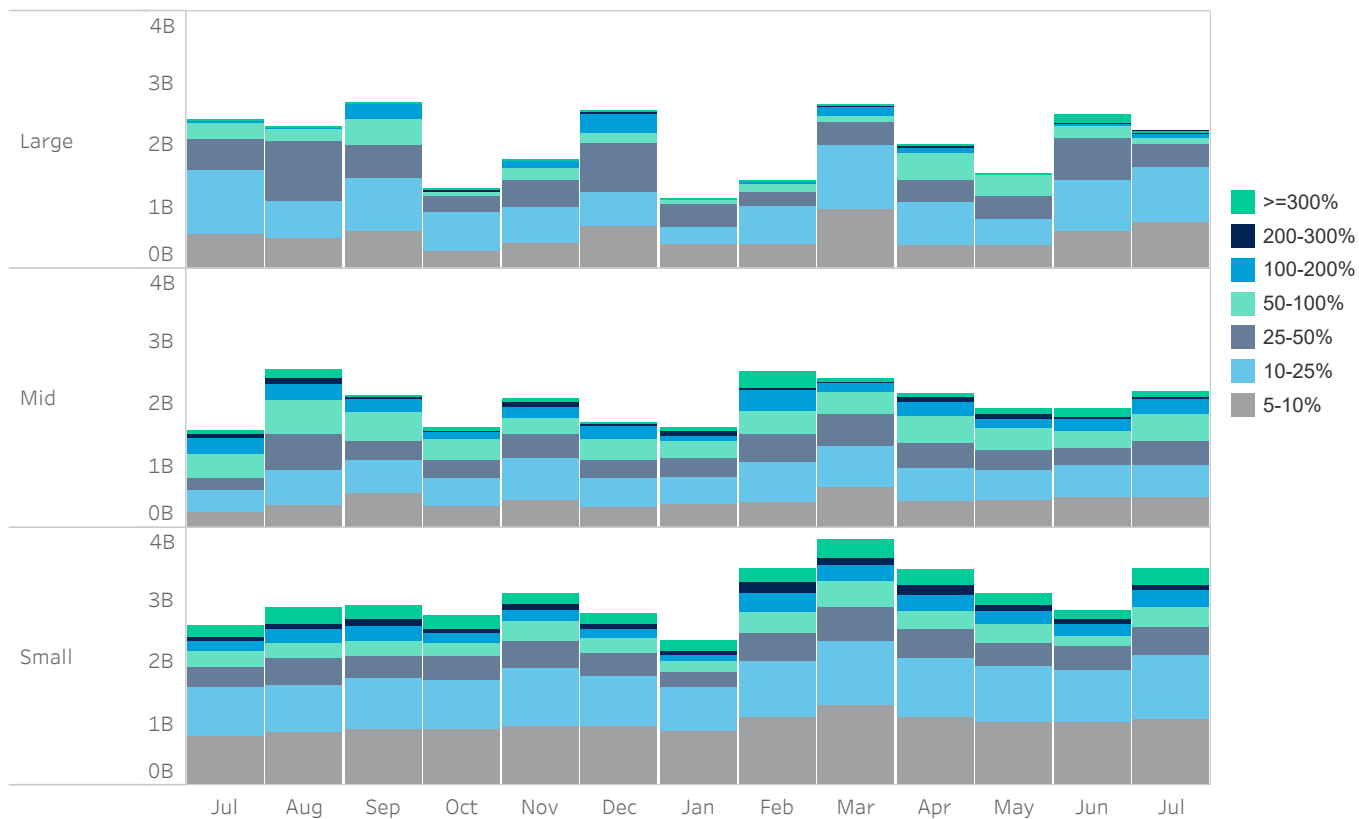
## Average Daily Turnover (Notional USD)



## Venue Market Share (Notional USD)



## Large Sized Trades (>=5%ADT)

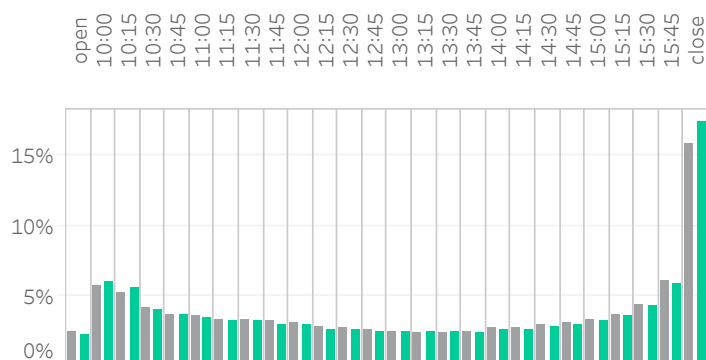


Source data: Virtu Financial

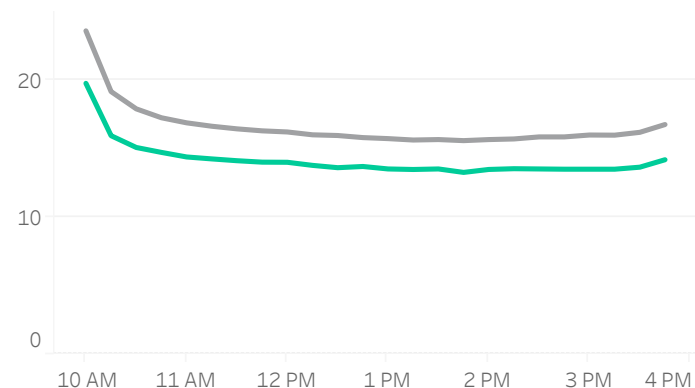


# Australia

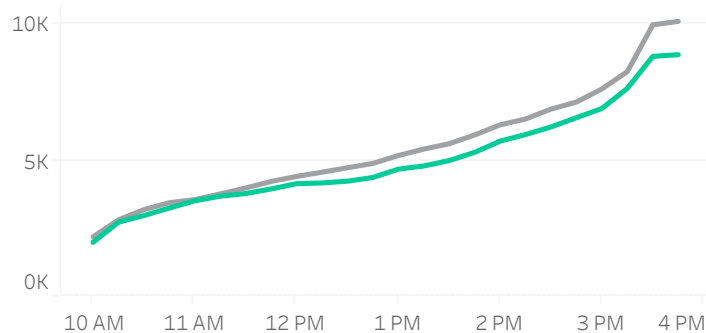
## Volume Curve



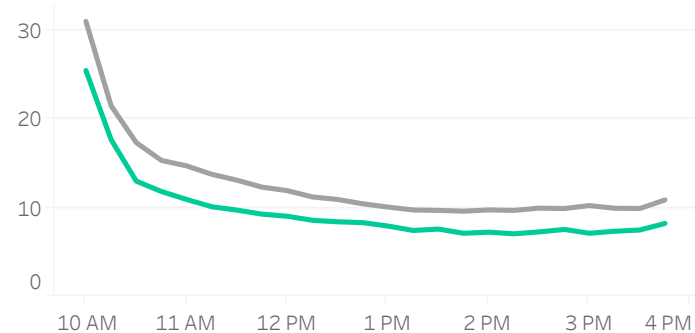
## Intraday Spread (bps)



## Intraday Quotesize (Shares)



## Intraday Volatility (bps)



■ Rolling 12 Months Avg ■ July 2021

## Spread Bps

	20 Q4			21 Q1			21 Q2			21 Q3
	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21
firstHalfHour	19.9	19.5	18.7	19.8	20.2	20.0	18.3	18.9	17.5	17.1
midday	15.2	16.0	15.3	15.0	15.5	15.6	14.7	14.9	14.1	13.8
lastHalfHour	16.8	16.7	15.7	15.0	15.5	15.6	14.9	14.9	14.3	13.9

## One Minute Volatility Bps

firstHalfHour	17.7	18.4	15.2	14.4	16.6	16.8	16.0	17.5	17.4	15.5
midday	5.0	5.1	4.3	4.1	4.6	4.8	3.7	3.9	3.8	3.6
lastHalfHour	4.4	4.3	3.7	3.7	3.4	3.7	3.4	3.6	3.2	3.3

## Quotesize in Shares

firstHalfHour	3,258	3,208	2,917	2,583	2,326	2,194	2,218	2,190	2,320	2,426
midday	6,767	7,424	6,268	5,358	4,931	4,686	4,526	4,489	4,747	4,584
lastHalfHour	15,112	15,132	13,233	11,014	9,734	9,100	8,141	8,231	9,230	8,943

Median used for all metrics

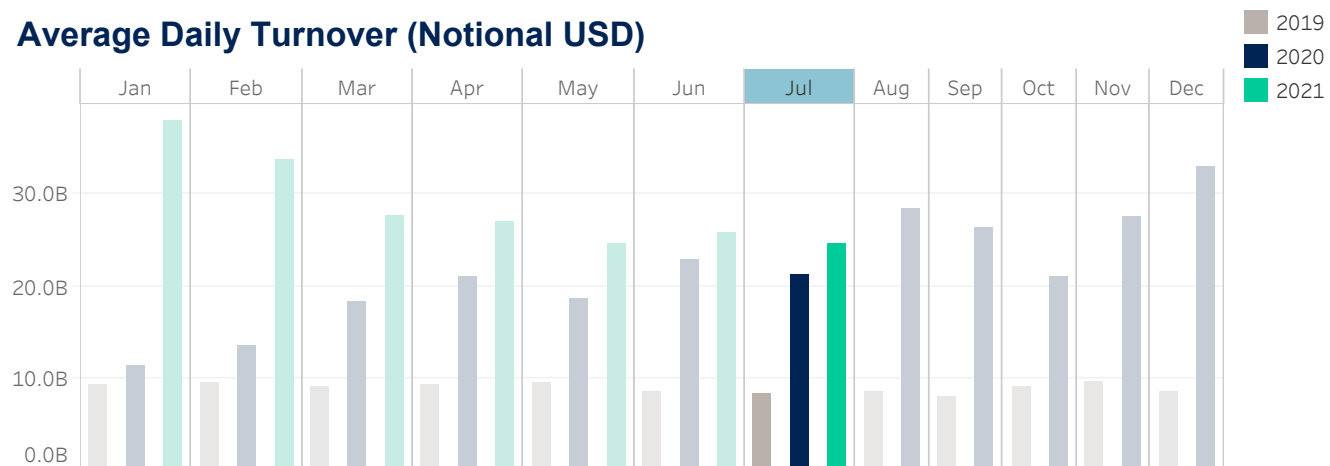
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

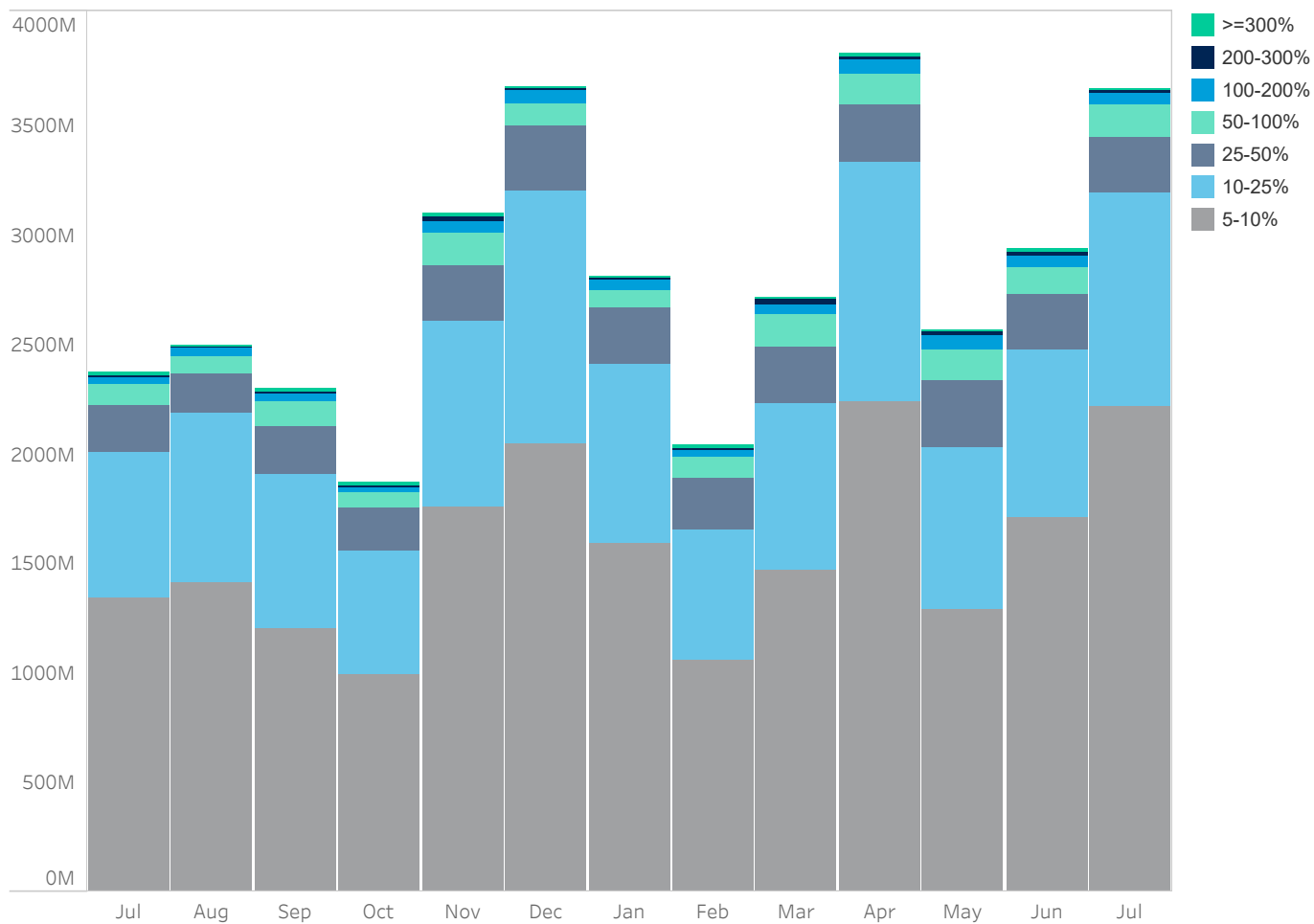


# South Korea

## Average Daily Turnover (Notional USD)



## Large Sized Trades (>=5%ADT)

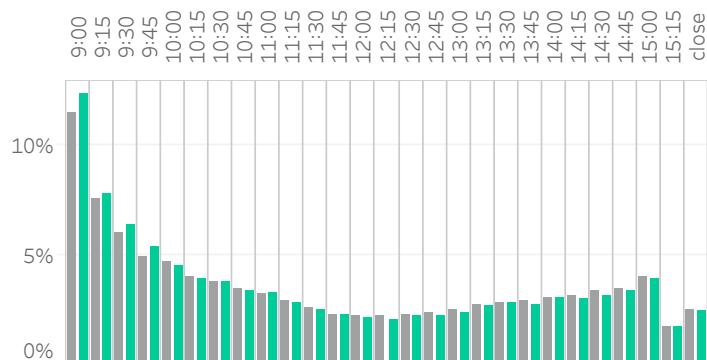


Source data: Virtu Financial

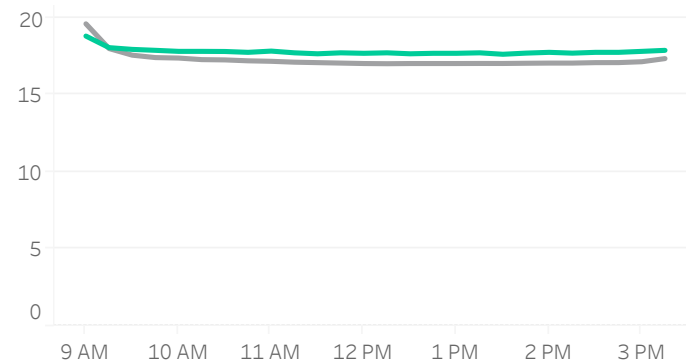


# South Korea

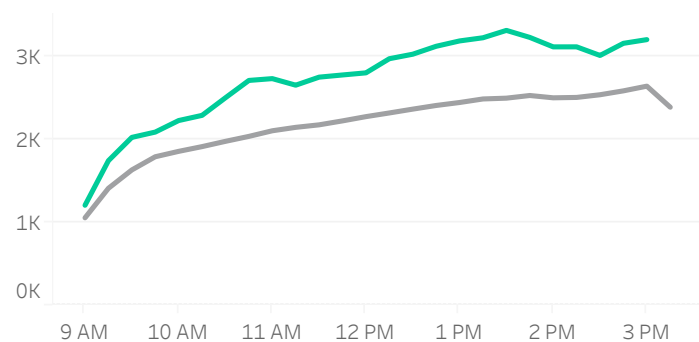
## Volume Curve



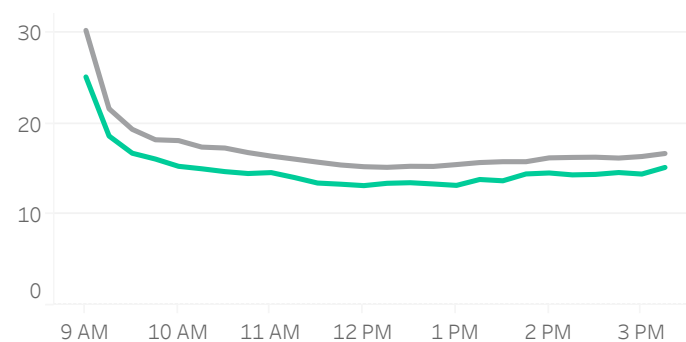
## Intraday Spread (bps)



## Intraday Quotesize (Shares)



## Intraday Volatility (bps)



■ Rolling 12 Months Avg ■ July 2021

## Spread Bps

	20 Q4			21 Q1			21 Q2			21 Q3
	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21
firstHalfHour	17.9	17.6	17.4	18.0	17.4	17.1	17.1	18.3	18.3	18.3
midday	17.0	16.3	15.4	15.9	15.6	15.8	16.2	17.2	17.6	17.7
lastHalfHour	17.1	16.3	15.6	15.8	15.6	15.8	16.3	17.2	17.6	17.8

## One Minute Volatility Bps

firstHalfHour	15.2	15.6	13.9	20.9	18.0	15.1	12.7	15.6	13.2	13.0
midday	11.0	10.8	10.6	11.4	11.1	11.0	10.5	10.9	10.5	10.5
lastHalfHour	18.1	15.3	14.1	11.3	11.2	14.2	19.7	16.7	26.5	22.9

## Quotesize in Shares

firstHalfHour	1,069	1,370	1,605	1,352	1,140	1,138	1,384	1,302	1,675	1,526
midday	2,043	2,619	3,046	2,400	1,995	1,986	2,504	2,462	3,161	2,812
lastHalfHour	2,399	3,087	3,572	2,905	2,454	2,358	2,702	2,864	3,744	3,230

Median used for all metrics

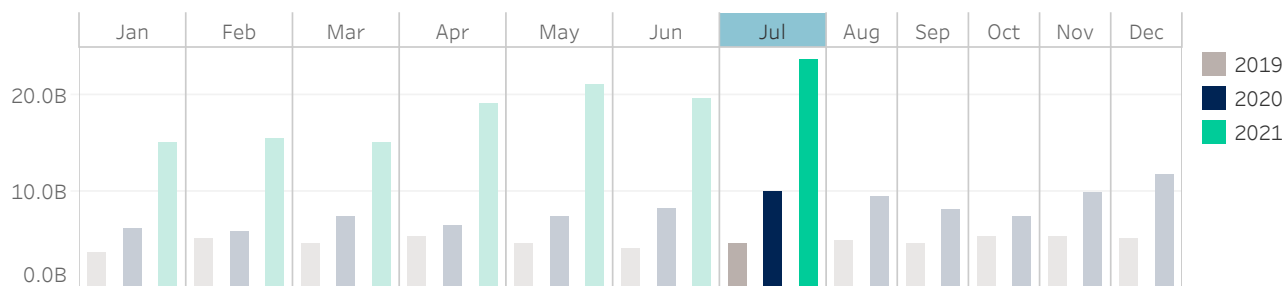
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

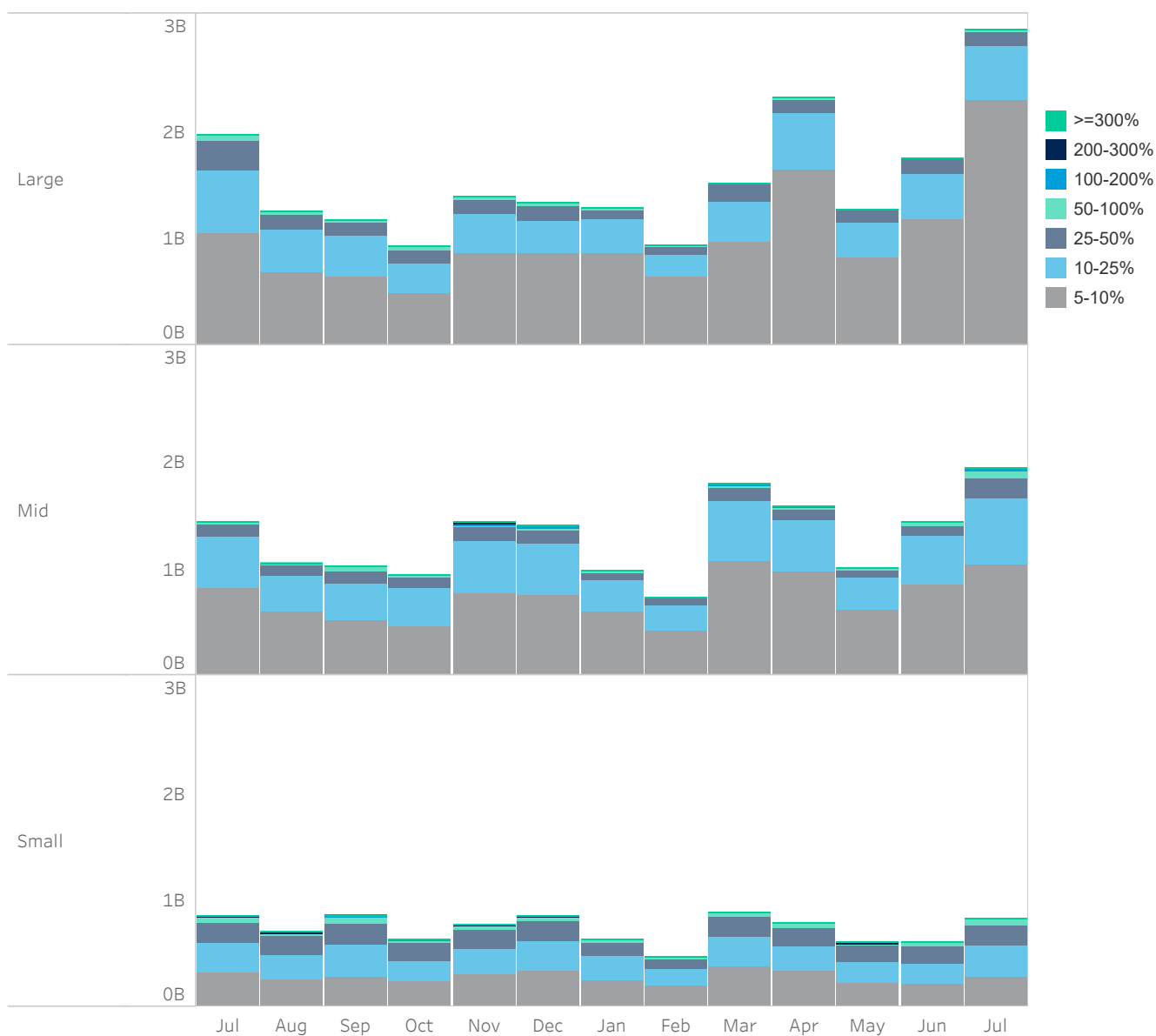


# Taiwan

## Average Daily Turnover (Notional USD)



## Large Sized Trades (>=5%ADT)

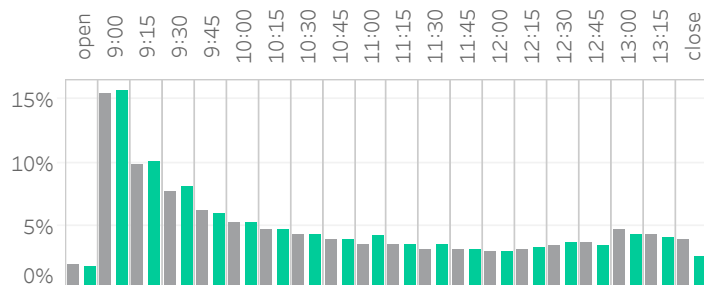


Source data: Virtu Financial

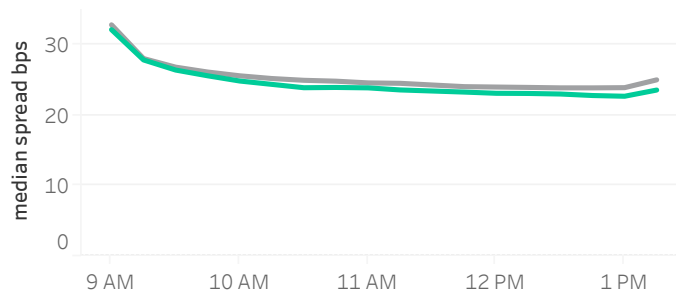


# Taiwan

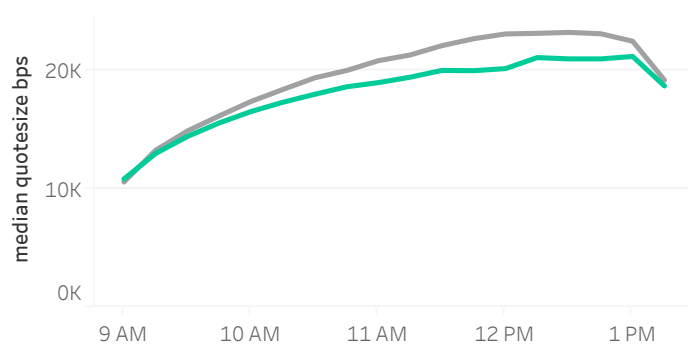
## Volume Curve



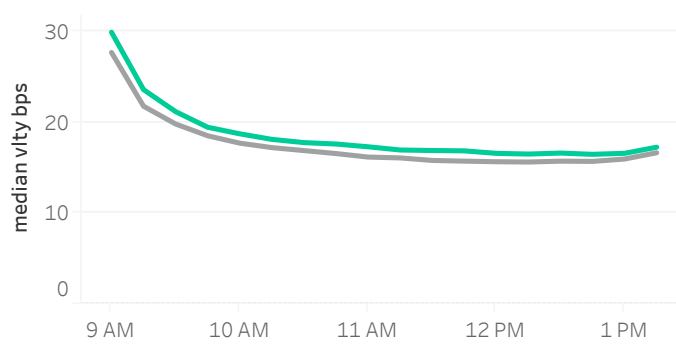
## Intraday Spread (bps)



## Intraday Quotesize (Shares)



## Intraday Volatility (bps)



■ Rolling 12 Months Avg    ■ July 2021

## Spread Bps

	20 Q4			21 Q1			21 Q2			21 Q3
	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21
firstHalfHour	29.1	28.0	27.8	28.5	28.3	26.1	27.4	35.2	28.7	29.0
midday	24.8	23.9	24.0	24.0	23.3	22.2	22.9	27.8	23.4	23.6
lastHalfHour	24.9	23.4	23.6	24.1	23.1	22.0	22.3	27.0	23.2	22.7

## One Minute Volatility Bps

firstHalfHour	12.6	12.3	13.7	15.5	15.7	12.5	16.2	27.1	15.6	17.1
midday	6.6	6.3	6.8	7.2	6.8	6.6	8.2	11.2	7.6	7.5
lastHalfHour	10.3	11.1	11.3	7.7	8.4	8.4	9.0	10.4	6.7	7.9

## Quotesize in Shares

firstHalfHour	13,285	14,716	14,592	12,798	12,216	14,419	14,883	9,069	12,568	12,027
midday	24,674	26,869	24,999	20,042	21,454	25,453	24,145	13,090	21,194	18,860
lastHalfHour	23,000	27,056	25,068	20,321	22,767	26,000	24,740	13,874	21,503	20,270

Median used for all metrics

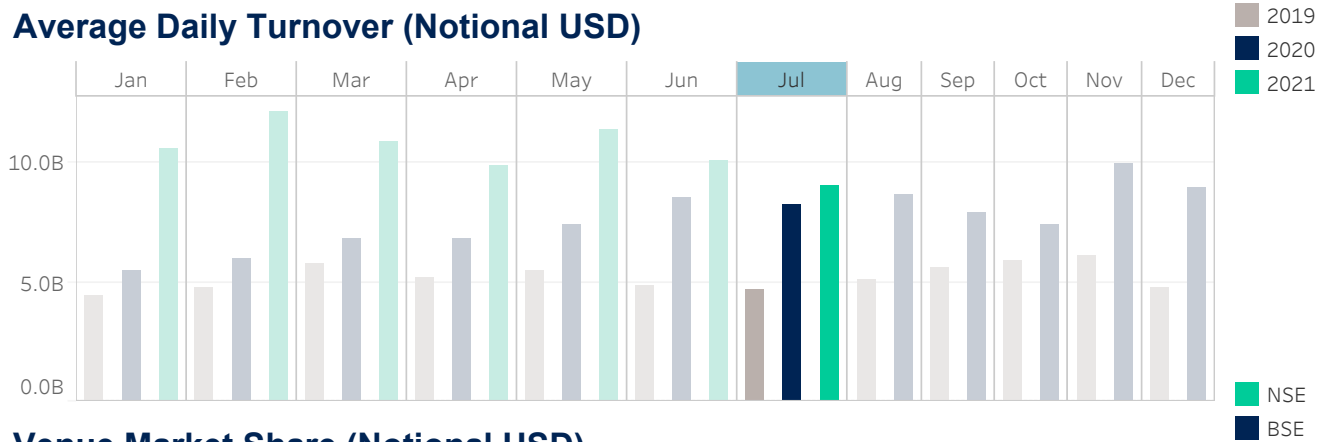
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

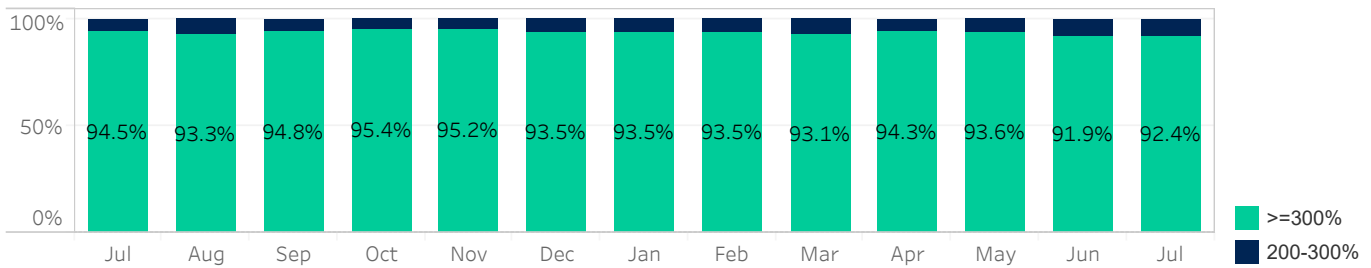


# India

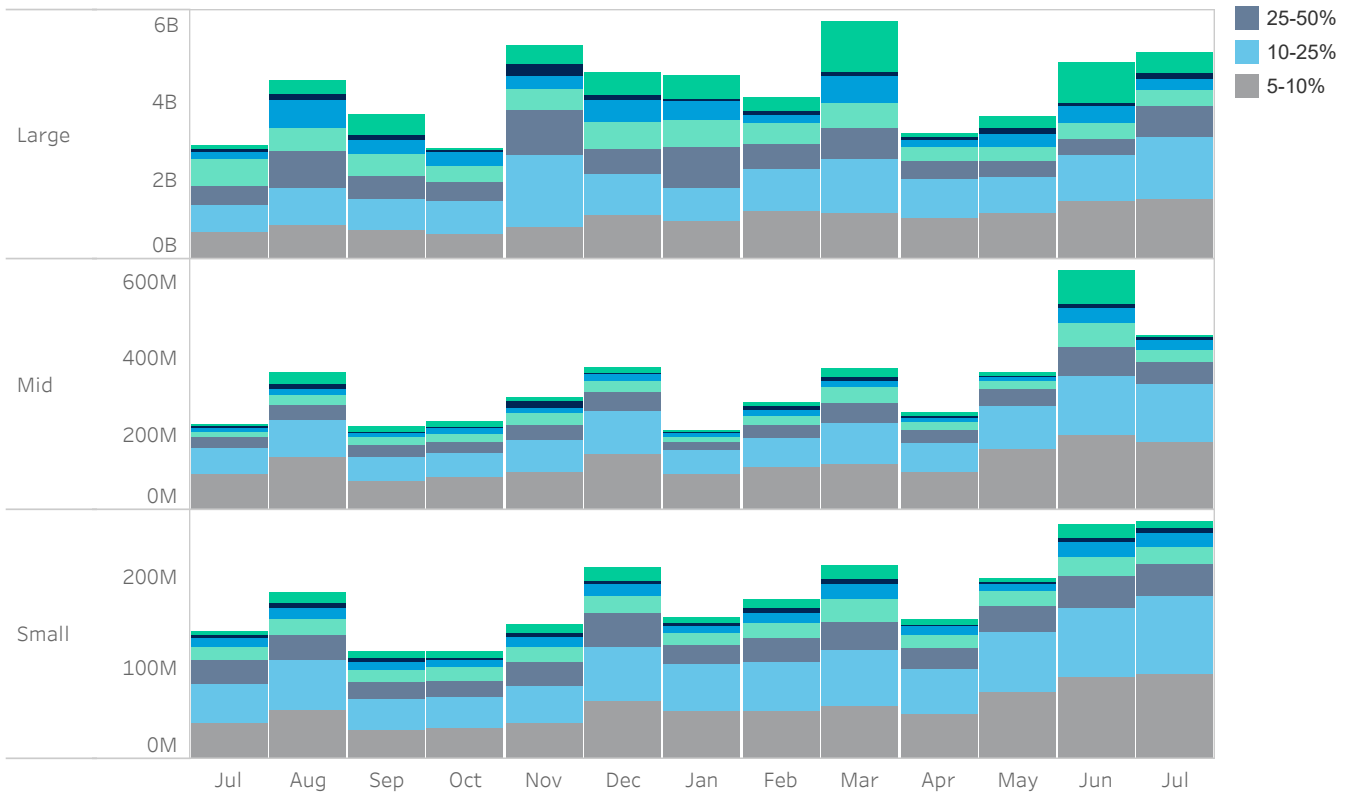
## Average Daily Turnover (Notional USD)



## Venue Market Share (Notional USD)



## Large Sized Trades (>=5%ADT)



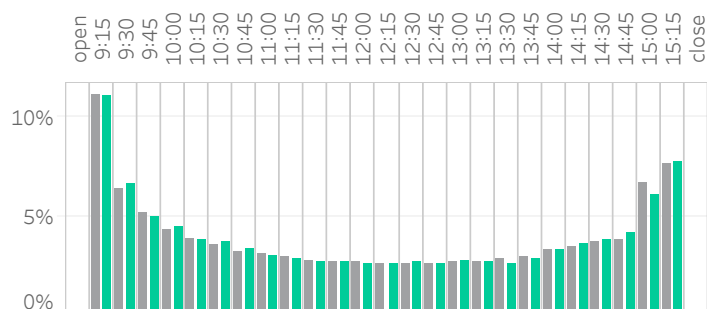
Source data: Virtu Financial



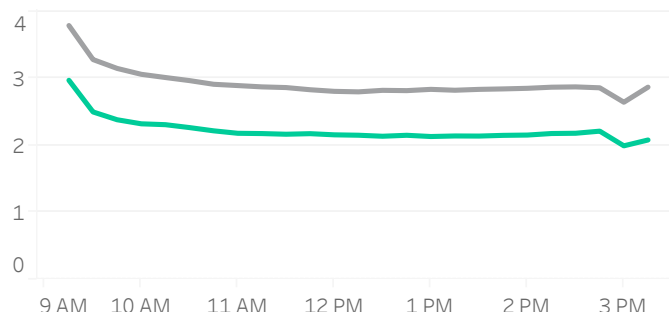


# India

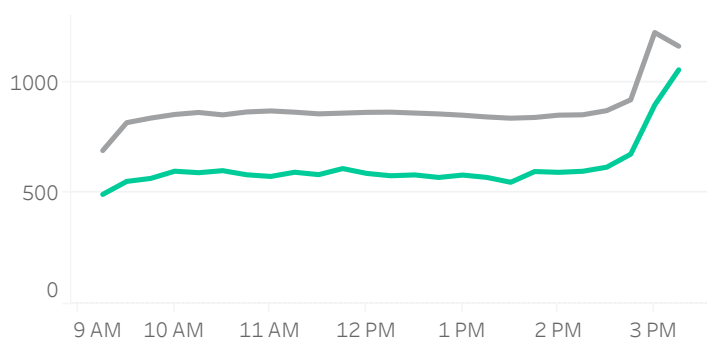
## Volume Curve



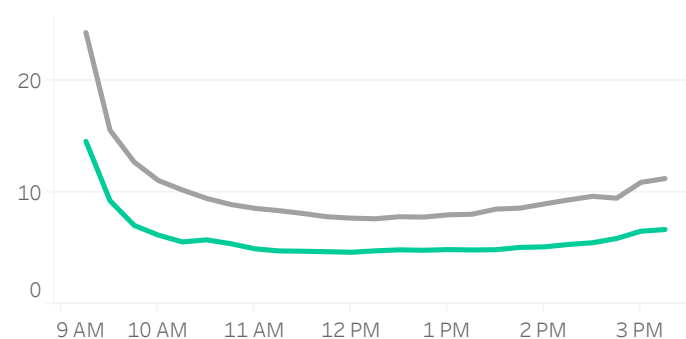
## Intraday Spread (bps)



## Intraday Quotesize (Shares)



## Intraday Volatility (bps)



■ Rolling 12 Months Avg ■ July 2021

## Spread Bps

	20 Q4			21 Q1			21 Q2			21 Q3
	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21
firstHalfHour	3.4	3.4	3.2	3.1	3.2	3.0	3.1	2.9	2.8	2.6
midday	3.0	2.7	2.7	2.7	2.6	2.5	2.5	2.3	2.2	2.2
lastHalfHour	2.7	2.6	2.5	2.5	2.6	2.3	2.3	2.2	2.1	2.0

## One Minute Volatility Bps

firstHalfHour	16.9	16.6	15.6	17.3	19.8	17.6	17.7	16.1	12.5	10.5
midday	7.4	7.3	6.4	7.8	8.8	8.2	7.6	6.4	5.3	4.7
lastHalfHour	9.5	9.4	9.1	10.1	11.0	10.6	8.9	8.2	7.1	6.1

## Quotesize in Shares

firstHalfHour	860	814	789	684	626	680	559	541	548	533
midday	947	892	876	781	757	695	650	630	584	593
lastHalfHour	1,157	1,220	1,239	1,080	1,041	1,074	974	918	903	952

Median used for all metrics

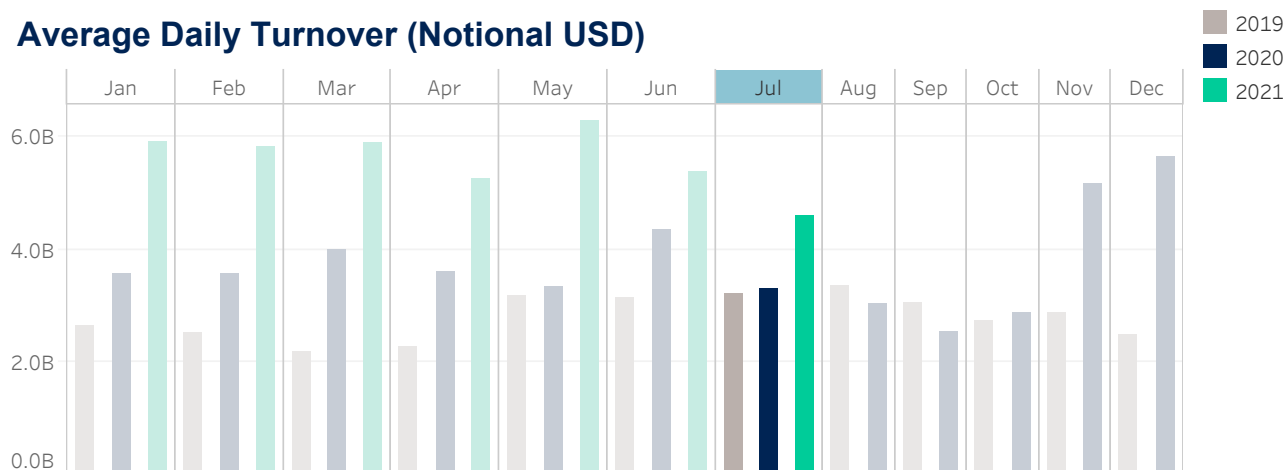
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

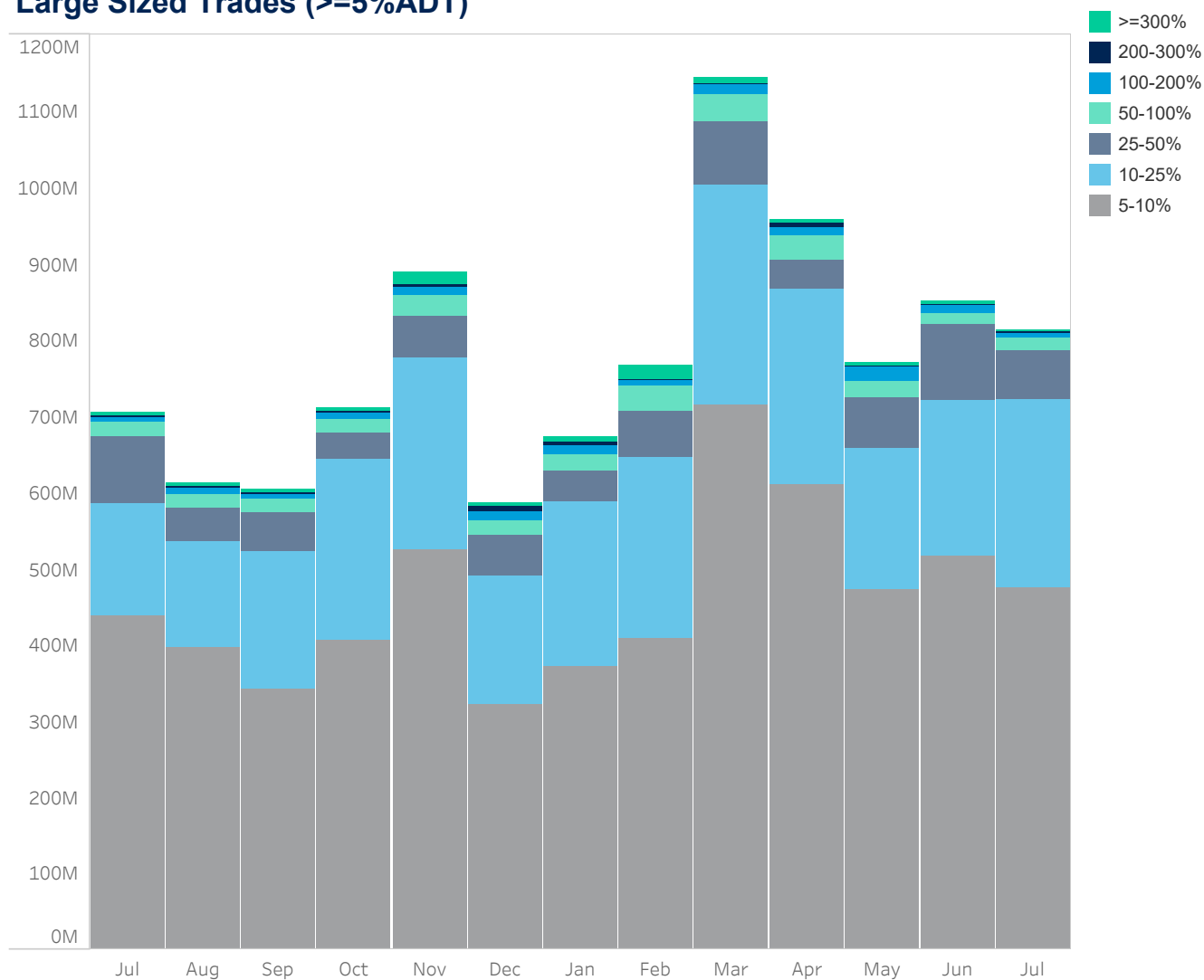


# Thailand

## Average Daily Turnover (Notional USD)



## Large Sized Trades (>=5%ADT)

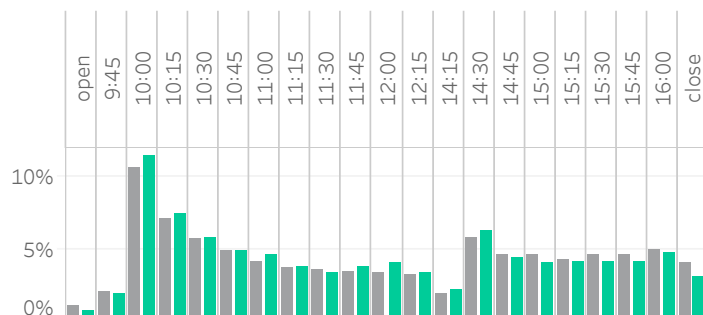


Source data: Virtu Financial

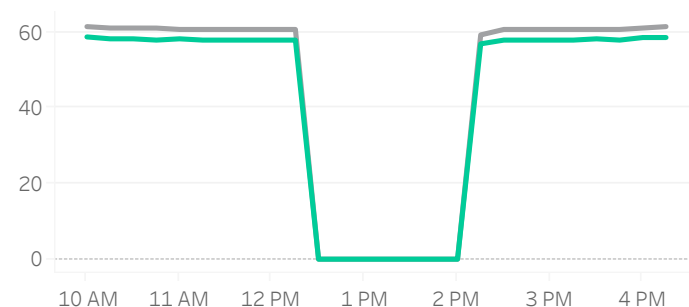


# Thailand

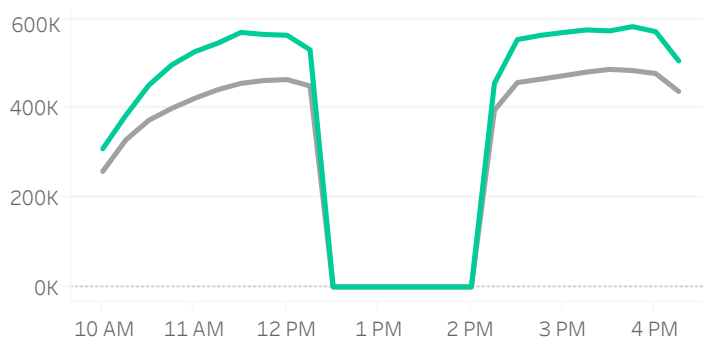
## Volume Curve



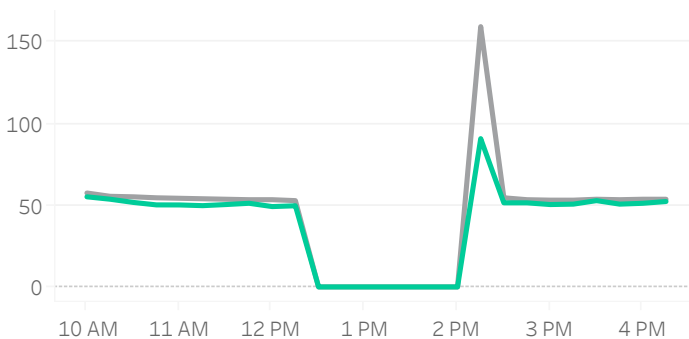
## Intraday Spread (bps)



## Intraday Quotesize (Shares)



## Intraday Volatility (bps)



■ Rolling 12 Months Avg ■ July 2021

## Spread Bps

	20 Q4			21 Q1			21 Q2			21 Q3	
	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21	
firstHalfHour	65.6	64.5	60.3	59.5	61.8	58.7	57.6	58.1	57.0	58.5	
midday	65.2	64.0	59.7	58.8	61.3	58.4	57.5	57.4	56.5	58.0	
lastHalfHour	65.8	64.3	60.3	59.5	61.5	58.6	57.8	57.6	56.9	58.7	

## One Minute Volatility Bps

firstHalfHour	182.9	47.2	43.7	163.6	249.4	233.7	232.1	230.9	177.0	159.4
midday	186.6	169.9	163.1	229.8	231.9	224.9	223.9	223.2	164.5	130.5
lastHalfHour								11.0		

## Quotesize in Shares

firstHalfHour	246,334	299,303	281,362	329,239	333,863	415,974	396,954	369,050	405,115	327,728
midday	400,858	509,326	469,149	511,597	531,652	673,700	702,142	632,652	659,585	550,461
lastHalfHour	415,566	492,431	486,137	524,220	541,490	680,594	713,523	624,167	686,033	542,139

Median used for all metrics

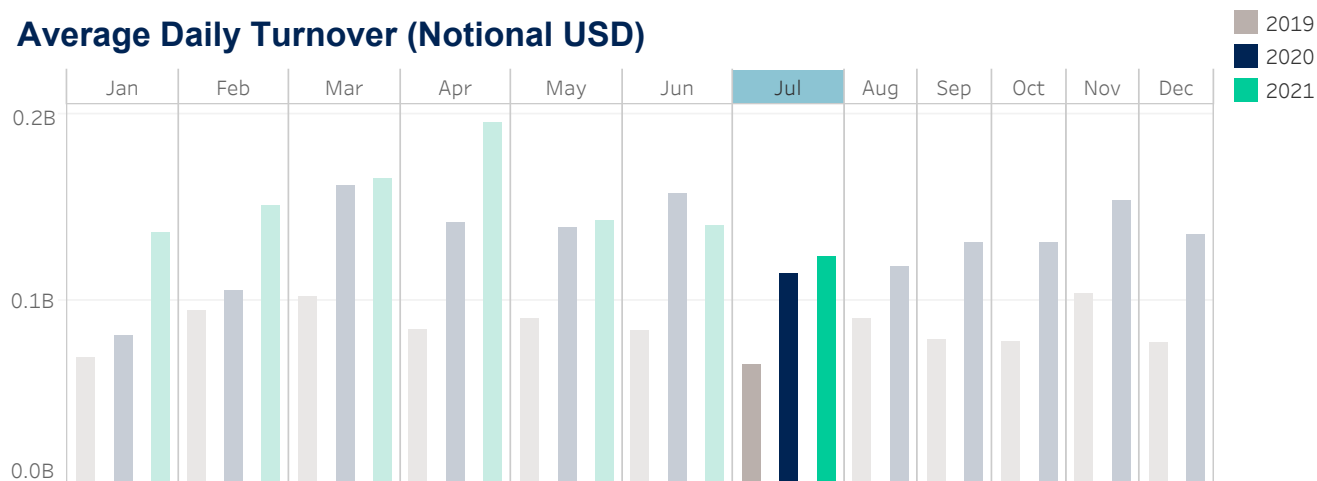
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

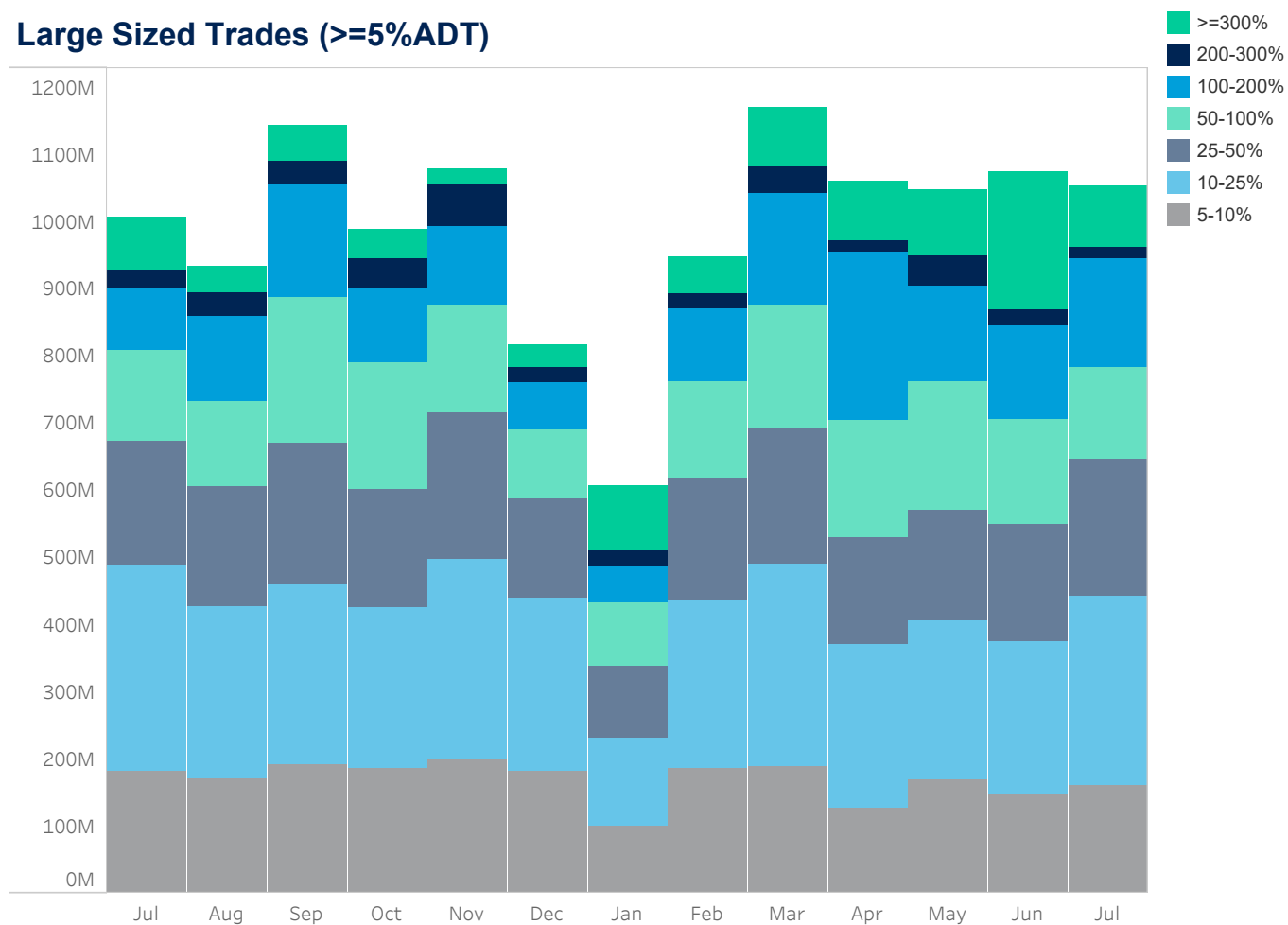


# New Zealand

## Average Daily Turnover (Notional USD)



## Large Sized Trades (>=5%ADT)

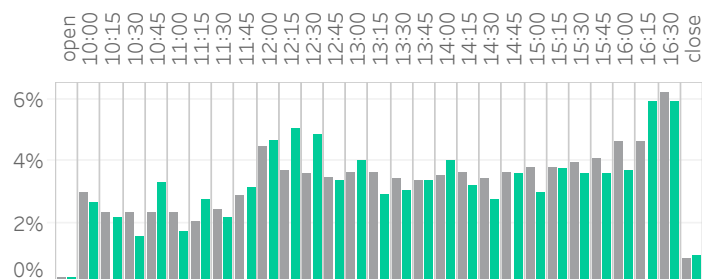


Source data: Virtu Financial

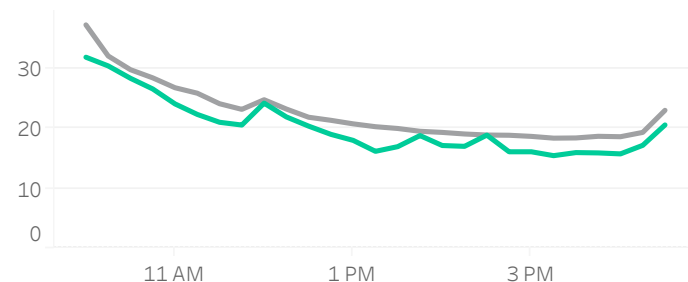


# New Zealand

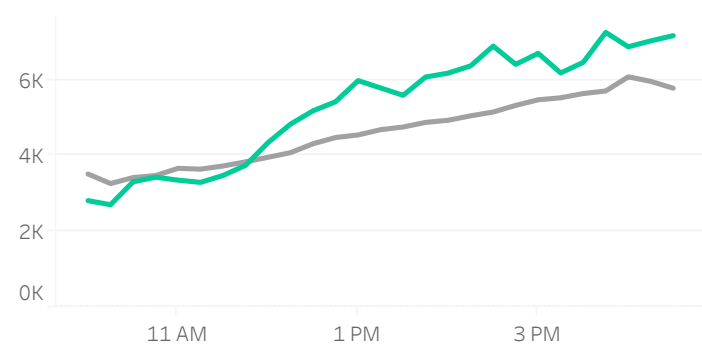
## Volume Curve



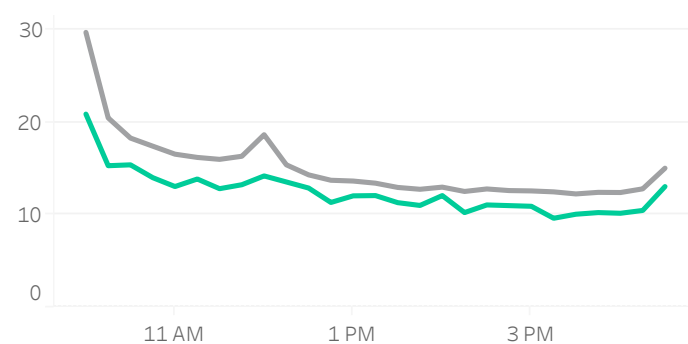
## Intraday Spread (bps)



## Intraday Quotesize (Shares)



## Intraday Volatility (bps)



■ Rolling 12 Months Avg ■ July 2021

## Spread Bps

	20 Q4			21 Q1			21 Q2			21 Q3
	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21
firstHalfHour	33.0	31.6	30.9	33.6	32.4	32.9	29.1	30.1	29.9	30.8
midday	20.2	20.4	21.4	22.0	22.2	21.3	19.3	20.5	18.4	19.0
lastHalfHour	19.0	19.3	18.4	22.0	22.2	21.1	21.1	19.6	17.7	19.0

## One Minute Volatility Bps

firstHalfHour	7.2	6.8	8.2	6.0	7.4	7.2	5.7	6.8	5.7	6.1
midday	3.4	3.7	3.5	3.7	3.6	3.5	3.6	3.5	3.5	3.4
lastHalfHour	3.8	3.5	4.4	4.7	4.4	6.7	4.0	5.3	4.4	4.0

## Quotesize in Shares

firstHalfHour	3,225	3,302	3,465	2,934	2,863	3,226	3,083	2,848	2,985	2,792
midday	4,023	4,341	4,878	4,261	4,306	4,708	5,232	5,145	5,287	5,453
lastHalfHour	4,548	5,448	6,196	5,198	5,319	6,011	6,862	6,538	6,859	7,213

Median used for all metrics

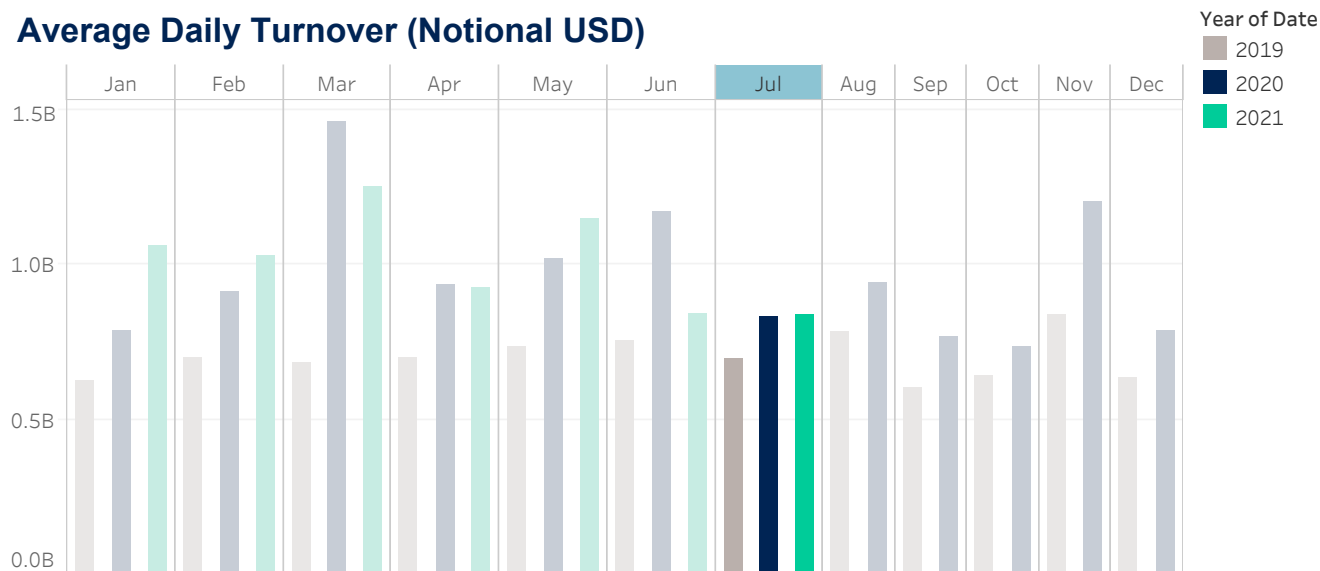
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

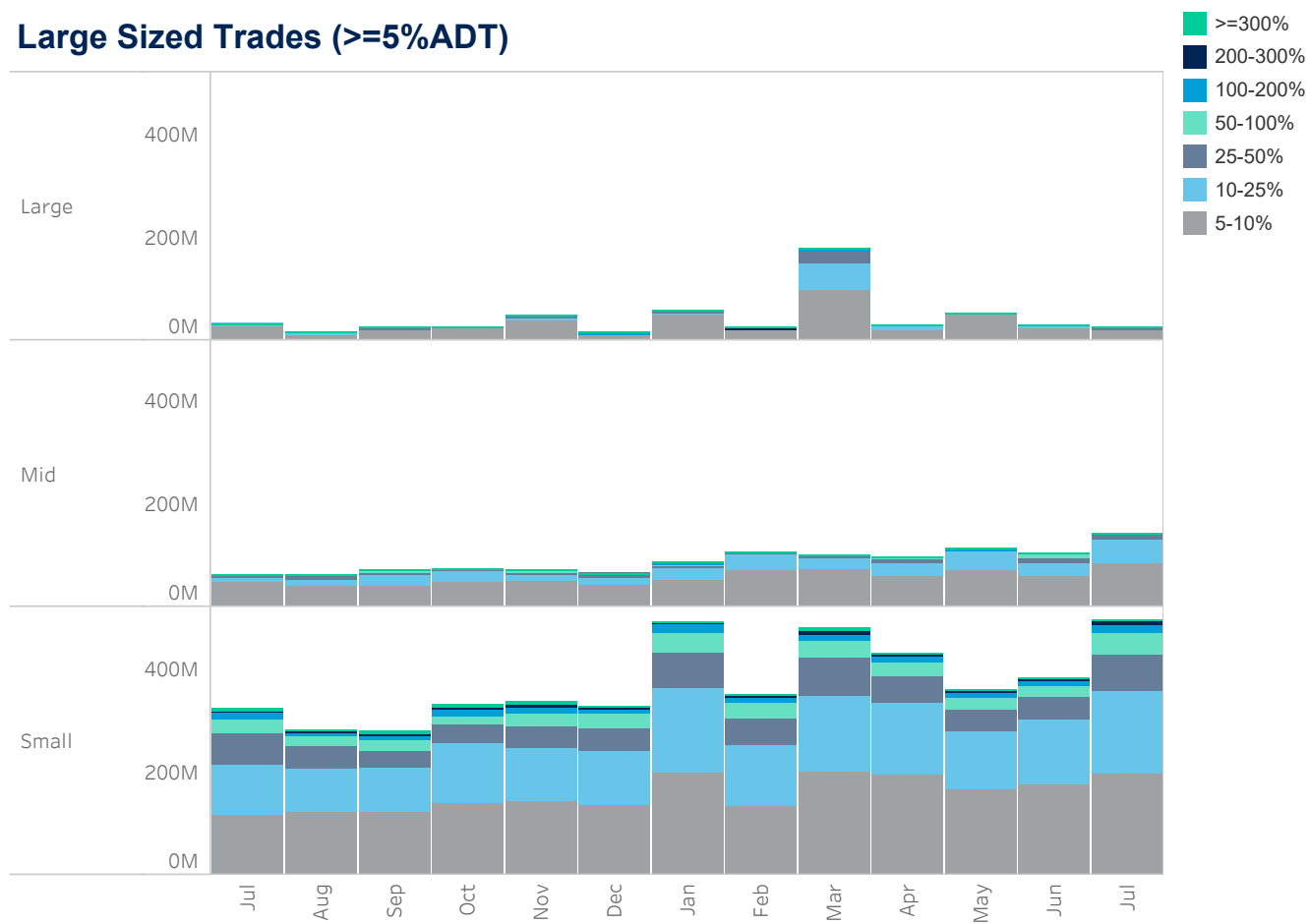


# Singapore

## Average Daily Turnover (Notional USD)



## Large Sized Trades (>=5%ADT)

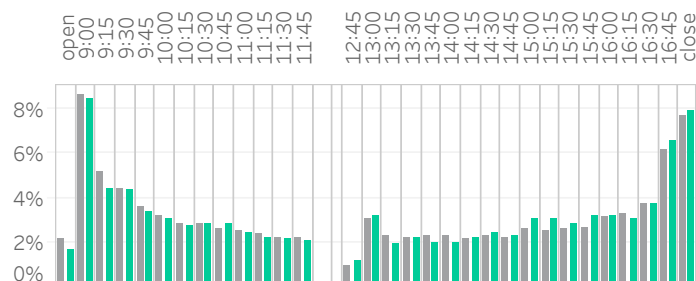


Source data: Virtu Financial

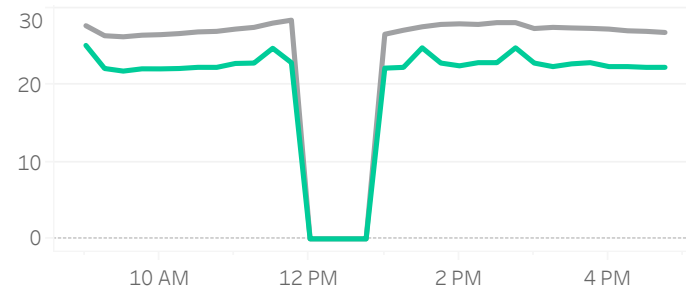


# Singapore

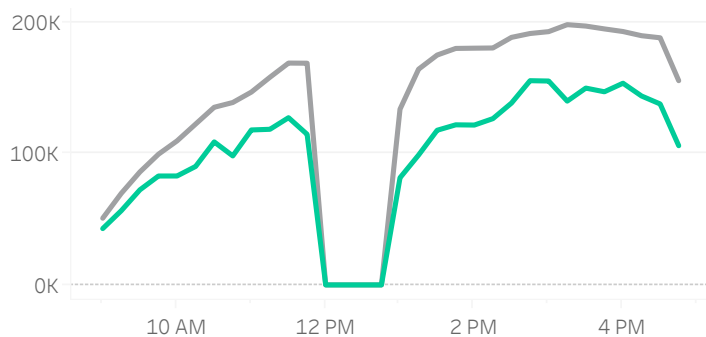
## Volume Curve



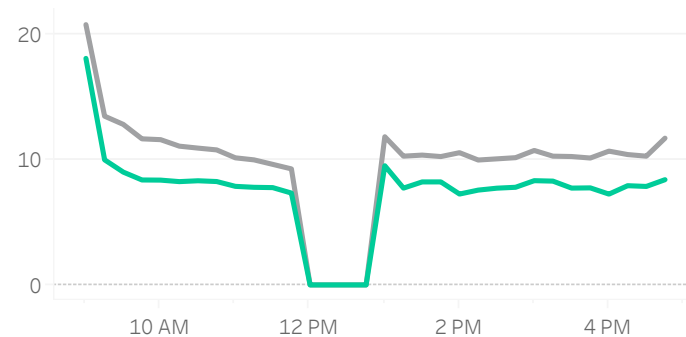
## Intraday Spread (bps)



## Intraday Quotesize (Shares)



## Intraday Volatility (bps)



■ Rolling 12 Months Avg ■ July 2021

## Spread Bps

	20 Q4			21 Q1			21 Q2			21 Q3
	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21
firstHalfHour	28.0	25.5	25.0	23.4	24.7	22.2	21.8	24.1	23.0	22.9
midday	28.4	25.3	24.7	24.4	25.3	22.6	22.5	24.5	22.5	22.7
lastHalfHour	28.2	25.4	24.5	24.3	24.0	22.2	21.0	23.3	21.4	22.3

## One Minute Volatility Bps

firstHalfHour	5.8	8.7	6.6	7.1	7.7	6.1	5.1	7.2	6.7	6.6
midday	5.2	5.3	6.0	5.4	5.7	4.5	5.6	6.6	4.1	4.5
lastHalfHour	5.0	5.2	6.3	5.7	3.9	5.2	5.3	6.6	3.8	4.9

## Quotesize in Shares

firstHalfHour	64,266	60,875	66,394	59,630	65,948	58,395	76,129	61,752	55,719	51,982
midday	210,740	196,271	177,331	161,583	189,564	171,200	197,195	181,346	141,942	122,557
lastHalfHour	211,276	221,777	179,991	180,964	195,173	162,162	180,880	165,147	134,075	118,307

Median used for all metrics

One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial



## Glossary

**Volume curve** - average of value traded during the month, per 15-minute time bin.

**Intraday volatility** - Median of difference between the high and low price within a one minute time bin, divided by that bin's VWAP

**Spread** - median of bid-ask spread of the index.

**Quotesize** - Median bid and ask size of all stocks in the index.

**Average daily turnover** - average daily value traded in the market.

## Indices used:

Australia: ASX 200

Japan: TOPIX

China: CSI 300

Hong Kong: Hang Seng Index

Taiwan: TWSE

India: NIFTY 50

Korea: MSCI Korea 25-50 Index

New Zealand: MSCI New Zealand IMI 25/50 Index

Singapore: MSCI Singapore Index

Thailand: MSCI Thailand IMI 25/5 Index

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