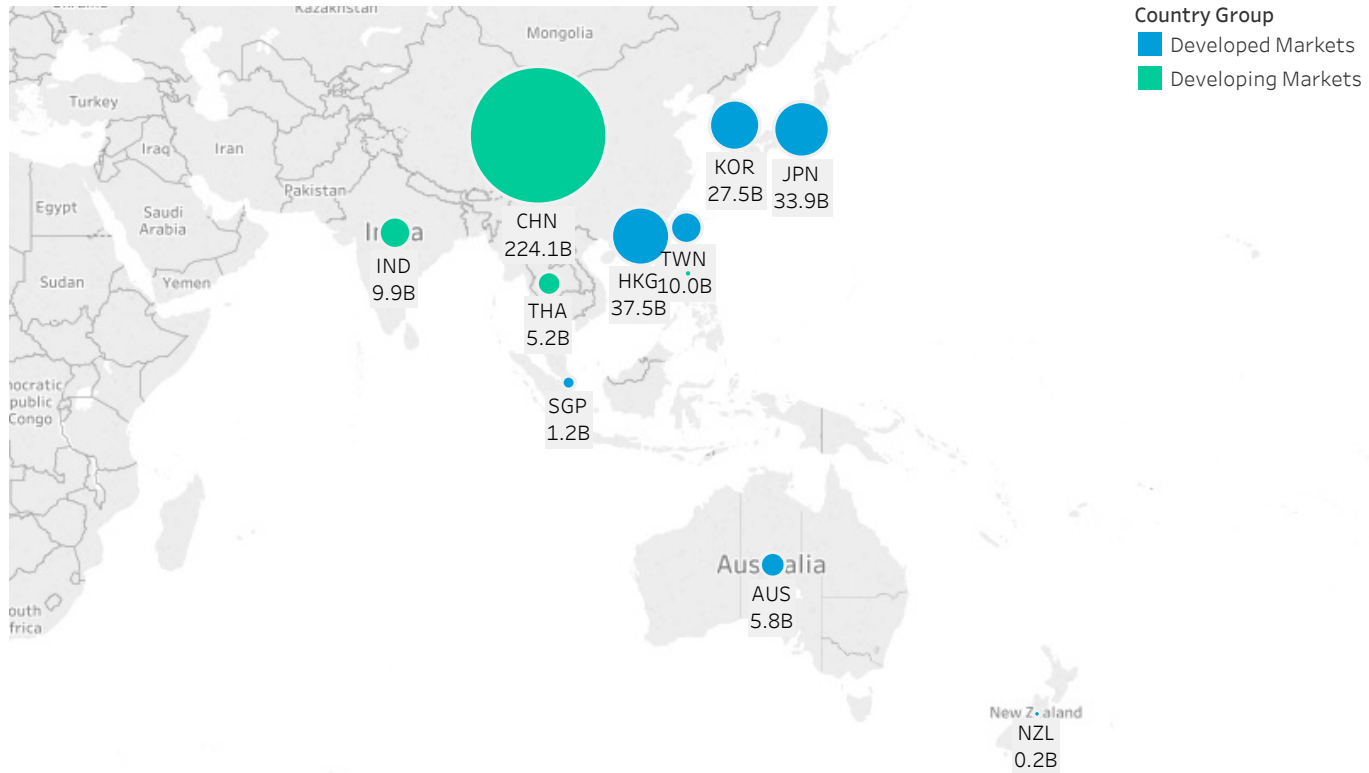


**November 2020**  
**APAC Market Structure Monthly**

**Average Daily Turnover (Notional USD)**



**Country Breakdowns**

**Hong Kong**

**China**

**Japan**

**Australia**

**South Korea**

**Taiwan**

**India**

**Thailand**

**New Zealand**

**Singapore**

# November 2020 Hong Kong

## Market Structure News

### Stock Connect Expansion Involving Pre-Revenue Biotech Firms and STAR Market-Listed Shares

On 27 November, Hong Kong Exchanges (HKEX) announced that the Stock Connect expansion plans will include eligible Hong Kong listed pre-revenue biotech companies and eligible A-shares listed on Shanghai's Stock Exchange, also referred to as STAR Market, in early 2021.

Per our cited source, the HKEX, Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE) have agreed that Hong Kong listed biotech companies will be included in Southbound Stock Connect given that they are constituent stocks of the Hang Seng Composite Index or have corresponding A-shares listed on SSE or SZSE. The three exchanges expect the inclusion of pre-revenue biotech stocks to take place in late December 2020. HKEX also clarifies that any biotech shares in Hong Kong, whose stock names do not end with marker B or those are already included in Southbound trading, will not be affected.

The HKEX, SSE and SZSE have also agreed that STAR Market listed shares, which are constituents of the SSE 180 Index and SSE 380 Index or have H-share counterparts, will be included for Northbound Stock Connect. Similarly, their corresponding H-share counterparts will be included in Southbound Stock Connect. Under relevant Hong Kong rules, the STAR Market-listed shares will only be accessible via Northbound trading of Stock Connect by institutional professional investors.

[https://www.hkex.com.hk/News/News-Release/2020/2011272news?sc\\_lang=en](https://www.hkex.com.hk/News/News-Release/2020/2011272news?sc_lang=en)

### HKEX Proposes to Extend MSCI Derivatives Trading During Holidays

On 23 October, the HKEX proposed plans to extend trading of all MSCI derivatives contracts on Hong Kong public holidays. The Hang Seng Index and Hang Seng China Enterprises Index derivatives will also be included, as may foreign exchange and commodities derivatives as market conditions warrant. In May 2020, the cited source reported that HKEX signed an agreement with MSCI to license a suite of MSCI indexes in Asia and emerging markets for the launch of derivatives contracts in Hong Kong.

Since July, 38 MSCI index futures contracts have been launched and as of 30 November, the October total open interest of Hong Kong MSCI derivatives products was 63,716 compared to the October total close interest of 835,34 versus 44,066 in September 2020.

Proposed trading arrangements for Hong Kong public holiday are identical to those of a normal trading day. Opening hours apply to both T and T+1 following the specification of each contract, whereas price limit up/down mechanism only applies to the T+1 session.

[https://www.hkex.com.hk/-/media/HKEX-Market/Services/Circulars-and-Notices/Participant-and-Members-Circulars/HKFE/2020/MO\\_DT\\_225\\_20\\_e.pdf](https://www.hkex.com.hk/-/media/HKEX-Market/Services/Circulars-and-Notices/Participant-and-Members-Circulars/HKFE/2020/MO_DT_225_20_e.pdf)  
[Paste link directly to browser to view official PDF]

### Hang Seng Tech Index Futures and Options Contracts Unveiled

Aiming to expand product coverage in the technology sector and exposure management tools, the HKEX introduced Hang Seng TECH Index futures on 23 November with options to follow on 18 January 2021.

Launched in July 2020, the Hang Seng TECH Index tracks the 30 largest technology companies in Hong Kong. Cited sources report that the Hang Seng TECH Index provided a 36% return in 2019 and a 60% return through the first 10 months of 2020.

Contract multiplier for the futures and options contract will be HK\$50 per index point, with a minimum fluctuation of 1 index point. Contract months range from spot, next calendar month and the following two quarterly months.

It should be noted that the addition of futures and options can generate additional trading in the underliers, as well as volume surges and possible price volatility on expirations.

<https://www.prnewswire.com/news-releases/hkex-to-introduce-futures-and-options-on-hang-seng-tech-index-301166911.html>  
<https://www.thestandard.com.hk/section-news/section/2/225000/Tech-index-futures-make-their-debut>  
[https://www.hkex.com.hk/News/News-Release/2020/201105news?sc\\_lang=en](https://www.hkex.com.hk/News/News-Release/2020/201105news?sc_lang=en)

### New Streamlined IPO Settlement Process Proposed

On 16 November, HKEX proposed a new web-based service called, Fast Interface for New Issuance (FINI), which seeks to digitalize the workflow and infrastructure of the IPO settlement process. FINI aims to reduce the time gap between IPO pricing and trading from five business days to one business day.

FINI's online platform allows IPO participants such as brokers, share registrars, sponsors and underwriters to share real-time information and coordinate inter-participant workflows throughout the IPO settlement cycle.

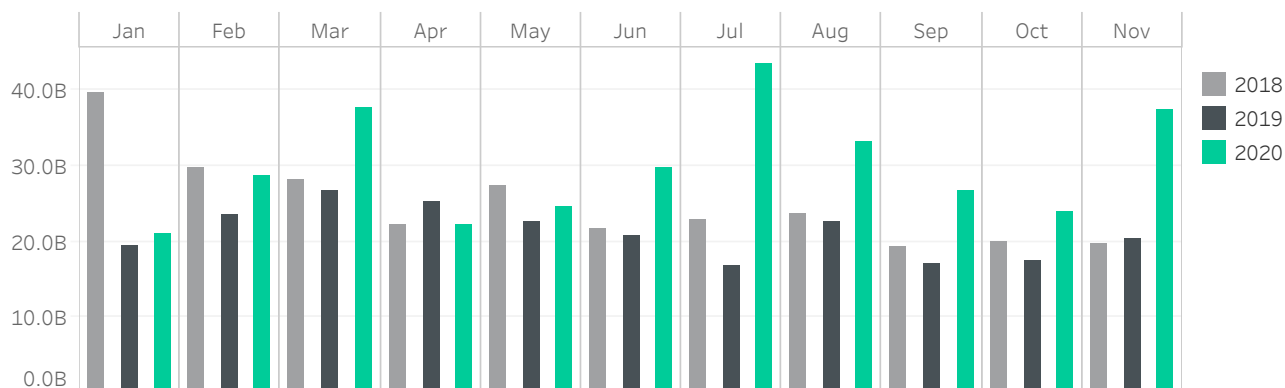
FINI also aims to alleviate distortive liquidity impacts in interbank money markets and capital flows as a result of over-subscribed IPOs in HK. Namely, funds supporting IPO subscriptions will be validated at each broker's designated bank, with only the actual share allotment value of each broker collected by the issuer after balloting. This will help alleviate the distortive impacts on Hong Kong dollar capital flows and interbank money markets.

[https://www.hkex.com.hk/News/News-Release/2020/201116news?sc\\_lang=en](https://www.hkex.com.hk/News/News-Release/2020/201116news?sc_lang=en)

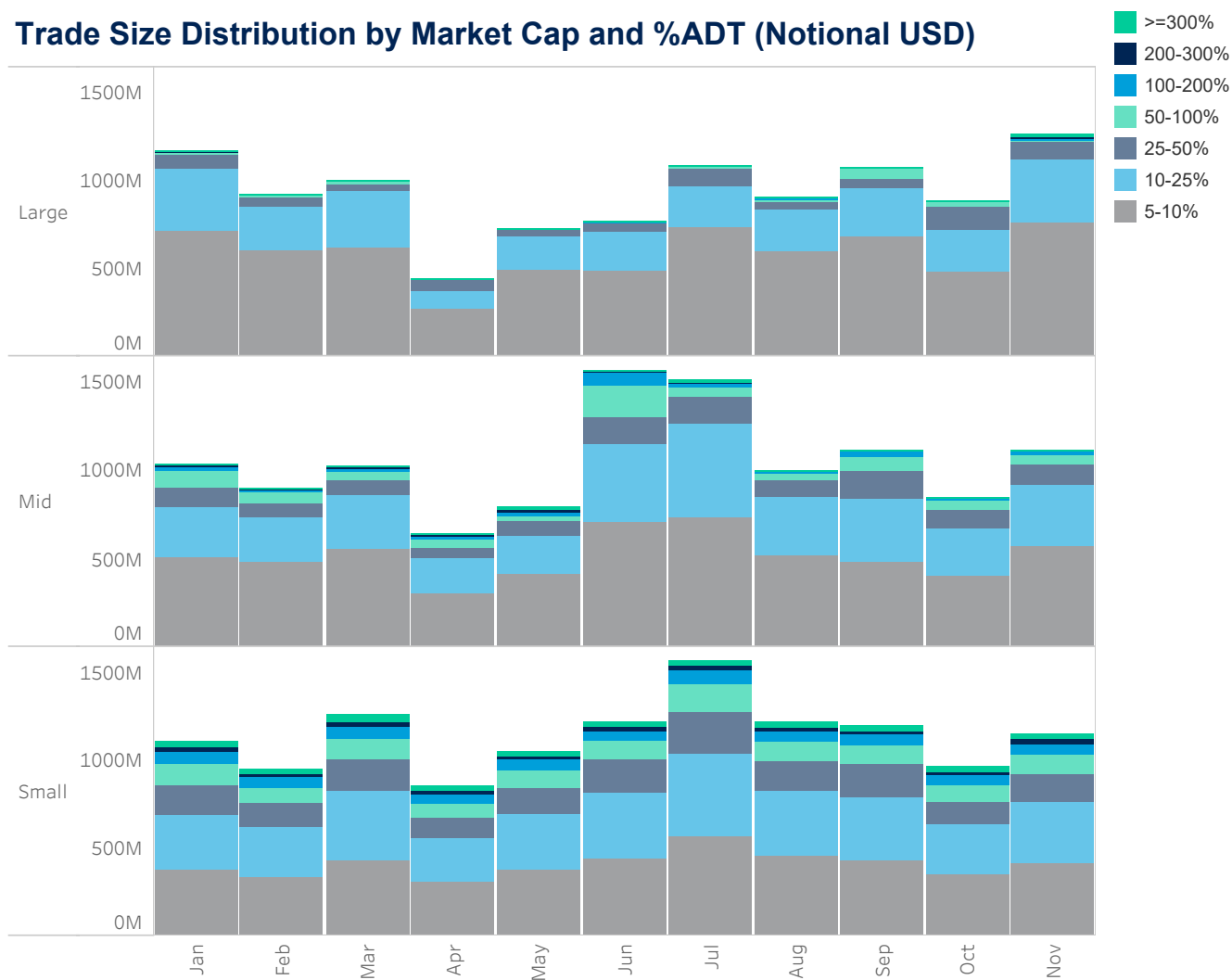


# Hong Kong

## Average Daily Turnover (Notional USD)



## Trade Size Distribution by Market Cap and %ADT (Notional USD)



Source data: Virtu Financial

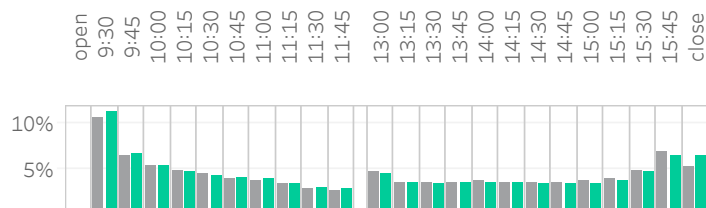


# Hong Kong

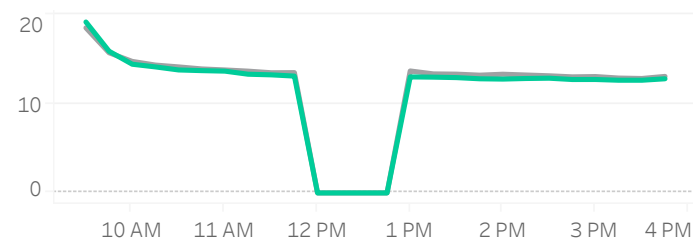
## Market Microstructure Observations

- Volumes at a 3 month high since August and are up 80%+ compared to November 2019 and November 2018 levels
- Trades in Large Cap names exceeded \$1.2B, the highest so far in 2020
- November spreads continued to fall and were at their lowest since July

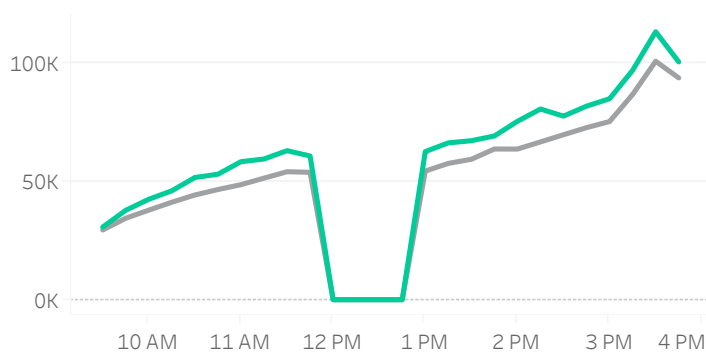
### Volume Curve



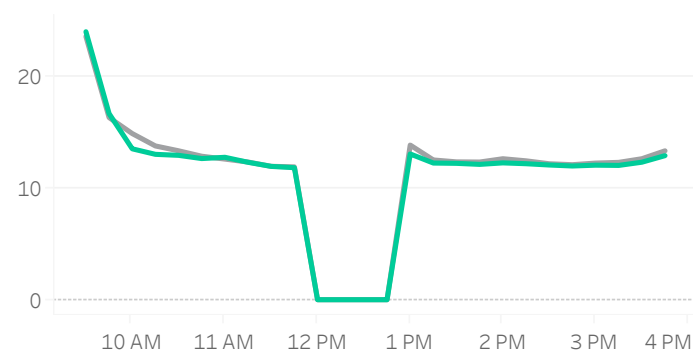
### Intraday Spread (bps)



### Intraday Quotesize (Shares)



### Intraday Volatility (bps)



■ YTD

■ November

### Spread Bps

	20 Q1			20 Q2			20 Q3			20 Q4	
	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20
firstHalfHour	14.5	15.3	18.3	16.5	16.1	16.3	17.6	16.7	17.0	17.3	16.8
midday	12.5	12.7	14.1	13.5	13.6	13.6	13.9	13.5	13.3	13.3	13.0
lastHalfHour	11.9	11.9	13.2	12.9	13.1	12.9	13.4	12.8	12.9	13.0	12.6

### One Minute Volatility Bps

firstHalfHour	9.5	11.0	21.3	14.1	13.9	14.1	15.9	13.6	11.7	11.6	13.6
midday	6.3	6.6	11.0	7.5	7.8	7.5	7.2	7.3	6.6	6.4	6.8
lastHalfHour	6.7	6.5	10.8	7.5	8.5	7.7	9.2	6.4	6.8	6.8	7.3

### Quotesize in Shares

firstHalfHour	34,839	32,423	33,494	31,448	37,444	34,006	30,895	29,501	29,248	29,429	35,285
midday	62,620	59,895	48,382	50,803	72,786	62,092	50,675	54,851	52,922	59,646	67,190
lastHalfHour	112,096	116,810	96,102	94,215	120,128	103,136	85,097	88,503	86,562	92,522	112,401

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

# November 2020

## China

### Market Structure News

#### US Executive Order Bans US Investors From Buying Chinese Securities Considered Threats to Defense

On 12 November, President Trump signed an Executive Order banning US investors from buying Chinese securities deemed as a threat to US national defense. Namely, "Beginning 9:30 a.m. EST on January 11, 2021, any transaction in publicly traded securities, or any securities that are derivative of, or are designed to provide investment exposure to such securities, of any Communist Chinese military company as defined [by the order]." Sales to divest from securities held as of the above time and date can be made until 11 November 2021.

A list of 89 companies have since been released that have components in the MSCI and FTSE EM indices, in ETFs, and in ADRs or dual listings. FTSE have already announced eight names will be removed from the EM index in the next rebalance on 18 December, the S&P Dow Jones will remove 21 securities and MSCI have released a consultation on next steps. The timing is interesting given President-Elect Biden will not take up office until 20 January, after the 11 January cut off on buys.

#### Executive Order:

<https://www.whitehouse.gov/presidential-actions/executive-order-addressing-threat-securities-investments-finance-communist-chinese-military-companies/>

#### List of impacted companies:

<https://www.defense.gov/Newsroom/Releases/Release/Article/2328894/dod-releases-list-of-additional-companies-in-accordance-with-section-1237-of-ty/>

#### Chinese Firms May be Forced to Delist From US venues

Reports indicate that the US Securities and Exchange Commission intends to set forth regulations that may force US exchanges to delist certain Chinese companies if they do not comply with US auditing rules. According to the Wall Street Journal, the proposal will likely be open to public consultation in December and could come into effect starting in January 2021.

As of October, more than 210 Chinese firms with a combined market capitalization of US\$2.2T are listed on major US stock exchanges.

<https://www.scmp.com/news/china/politics/article/3110275/us-moves-ahead-law-could-remove-chinese-firms-stock-exchanges>

#### CSRC Mulls Launching China-Singapore ETF Connect

During the China-Singapore (Chongqing) Connectivity Initiative Financial Summit on 23 November, the Chief Lawyer of the CSRC, Jiao Jin Hong, said that there has been increasing rates of cross-border investments and establishments of financial securities institutions between China and Singapore. He also commented that Singapore is a crucial hotspot for Chinese securities firms to gain international exposure.

The CSRC stated that they will continue to open up the securities and futures industry, collaborate with Singapore to promote deeper domestic and foreign market investments, and will consider launching a new China-Singapore ETF connect. The timeline for the ETF proposal is yet to be announced.

<https://finance.sina.com.cn/roll/2020-11-23/doc-iiznctke2907459.shtml> [Chinese Source]

#### CSRC Plans to Extend Registration System to Encompass China's Stock Market

The China Securities Regulatory Commission (CSRC) unveiled plans to expand the stock registration system as part of its ongoing efforts to optimize regulatory mechanisms. CSRC's Vice-Director of Listed Company Supervision, Sun Nianrui, commented on 19 November, "With the successful reform of the registration system on the SSE STAR Market and the ChiNext board, the reform will be steadily pushed forward—to apply the registration system to all boards of China's stock market."

According to the cited source, the CSRC plans to expand diversified exit channels to clear under-performing listed companies via active delisting, mergers and acquisitions, bankruptcy and reorganization. The CSRC would also implement zero tolerance requirement in any instances of financial fraud. This comes after the new Securities Law, introduced in March 2020, raised the maximum fine for financial violations from RMB600,000 (US\$90K) to RMB20M (US\$3M). Sun added that the State Council's Finance Committee had five meetings this year and dealt with various higher profile cases such as Kangmei Pharmaceutical, Zhangzidao Group and Kangde Xin Composite Material Group.

<https://www.shine.cn/biz/finance/2011190180/>

#### New Draft Rules to Counter E-Commerce Monopolies After Ant IPO Pulled

On 10 November, China's State Administration for Market Regulation (SAMR) published draft rules addressing online monopolistic strategies that block fair competition. These draft rules could apply to e-commerce and online payment platforms such as Alibaba Group's Taobao, JD.com, and/or Tencent Holding's WeChat Pay, and would scrutinize how a transaction differentiates customers based on big data, payment ability, consumption preferences, and usage habits. In addition, they would also seek to eradicate the 'choose one between two' practice where e-commerce marketplaces require brands to sell exclusively on their platforms.

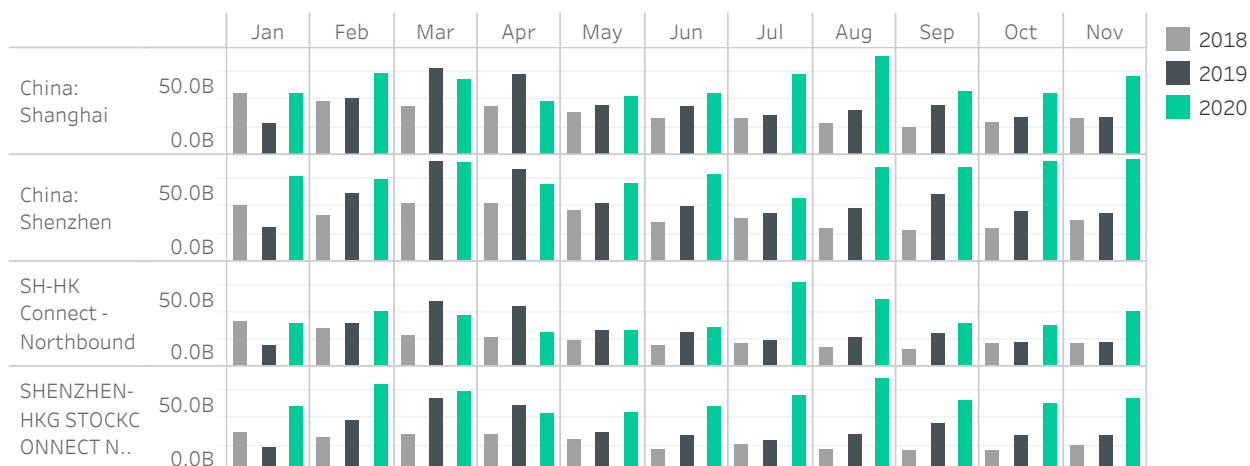
The drafted rules come after China's Financial Stability and Development Committee flagged the need to ensure fair competition and strengthening of anti-monopoly laws. Shortly afterwards, Ant Group's US\$37B IPO dual-listing was suspended by both the Shanghai and Hong Kong Stock Exchanges as regulators claimed Ant's "lucrative business needs to face tighter government scrutiny."

<https://www.reuters.com/article/china-regulation-ecommerce-idUSKBN27Q0JB>

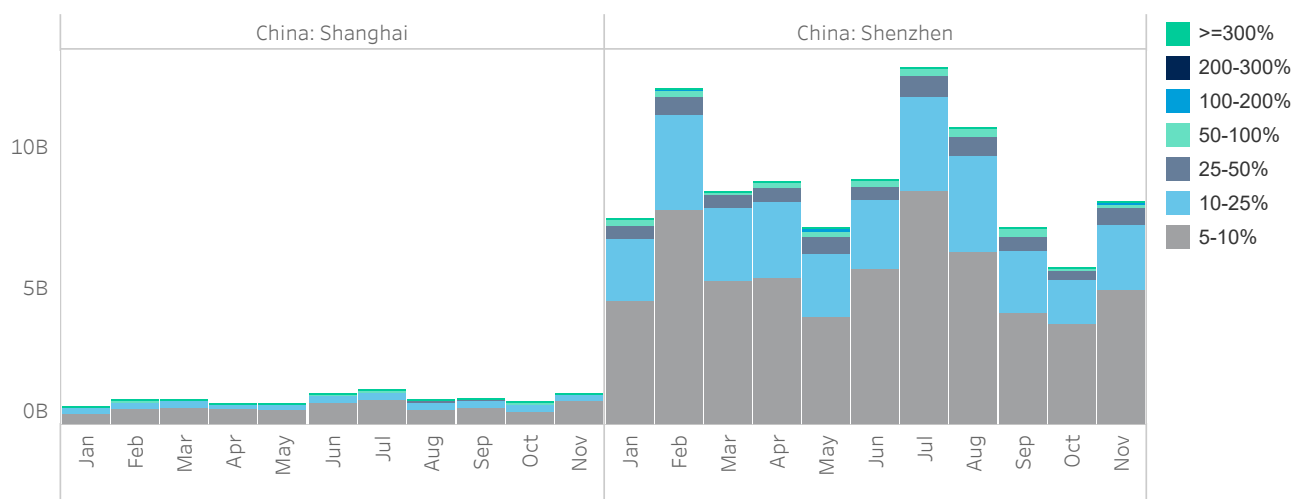


# China

## Average Daily Turnover (Notional USD)



## Trade Size Distribution by %ADT (Notional USD)



### Additional Market Structure News

#### The Regional Comprehensive Economic Partnership Agreement (RCEP) Signed Into Effect

On 15 November, the Regional Comprehensive Economic Partnership (RCEP) was signed by China, Japan, South Korea, Australia, New Zealand and 10 other ASEAN\* countries. According to a joint statement issued by the participating countries, the RCEP is the largest regional trading arrangement and marks an important step toward an ideal framework of global trade and investment rules.

The pact aims to create a new in-region trading structure, enable sustainable trade facilitation and revitalize supply chains disrupted by COVID-19. Tariffs on industrial and agricultural products will be reduced or removed and rules for data transmission are to be established.

The RCEP's participating countries cover a market of 2.2B people, accounting for 30% of the world's population and GDP. The US and India are absent from the RCEP.

\*ASEAN: The Association of Southeast Asian Nations

<https://www.shine.cn/news/nation/2011159816/>

#### Alliance Bernstein Applies to Set Up Local Fund Firm

According to the CSRC, on 12 November, Alliance Bernstein Hong Kong Limited (ABHKL), applied for a license to set up a mutual fund company in China. Year to date, ABHKL is the fifth foreign company seeking to launch a public fund, and joins other applicants such as: Blackrock, Neuberger Berman, Fidelity and Van Eck. The move is in response to the CSRC's decision to expand the financial sector in which foreign money managers can apply for total control of onshore operations.

Echoing the CSRC's new expansion policy, Blackrock received approval from the CSRC in August to set up a wholly-owned mutual fund management company, with the scope of mutual fund management, fund sales and private asset management. Meanwhile, JP Morgan Chase raised its stake with Chinese fund management joint ventures from 49% to 71% earlier this month. According to source, Schroders, Amundi and Temasek are other foreign firms are pursuing other opportunities in China's financial markets.

<https://www.globaltimes.cn/content/1206892.shtml>

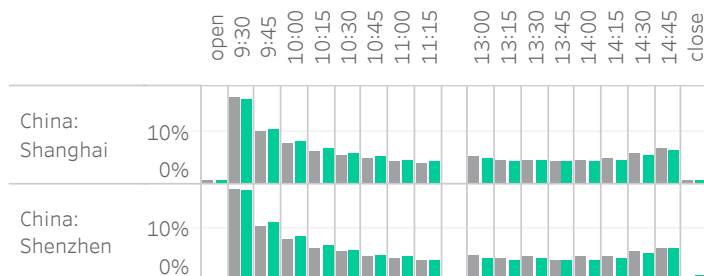


# China

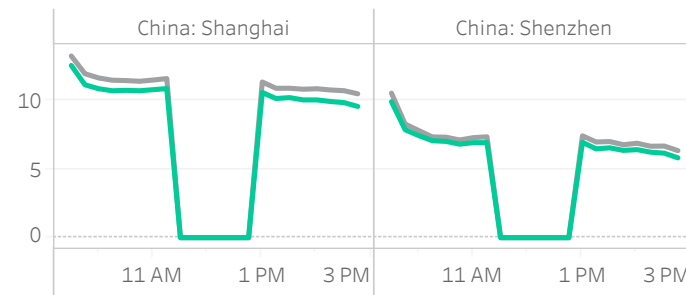
## Market Microstructure Observations

- Shenzhen saw the highest monthly turnover so far in 2020 at \$73.6B (previous high was October at \$71.9B)
- Shanghai volumes were up 26% from October at \$56.7B, down from the August peak of \$70.8B
- Intraday spreads and volatility across Shanghai and Shenzhen continued to fall and are now back to January 2020 levels

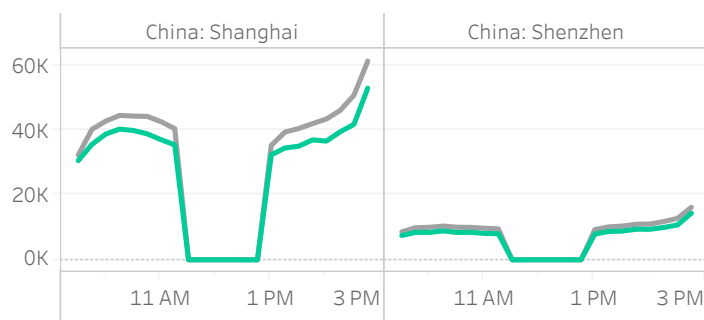
## Volume Curve



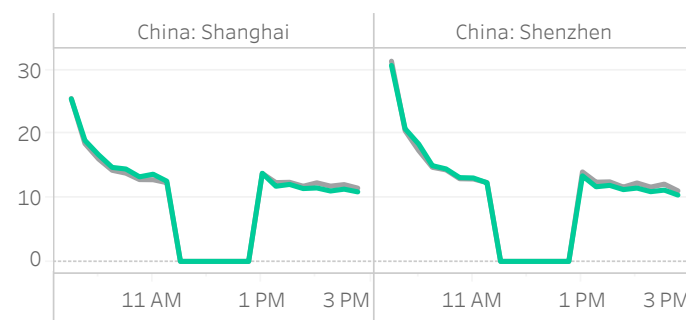
## Intraday Spread (bps)



## Intraday Quotesize (Shares)



## Intraday Volatility (bps)



■ YTD

■ November

## Spread Bps

	China: Shanghai										China: Shenzhen											
	20 Q1		20 Q2			20 Q3			20 Q4		20 Q1			20 Q2			20 Q3		20 Q4			
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
firstHalfHour	11.4	13.0	13.5	12.5	12.6	12.0	12.3	11.9	11.2	10.9	11.3	7.3	8.0	11.1	9.8	9.3	8.6	9.4	8.5	8.3	7.8	8.3
midday	10.6	11.6	12.1	11.6	11.3	11.2	10.8	10.0	10.2	10.1	10.3	6.3	6.8	9.2	8.0	7.7	7.2	6.9	6.4	6.6	6.3	6.7
lastHalfHour	10.4	11.0	11.4	11.1	11.0	11.0	10.2	9.5	9.9	9.6	9.6	5.9	6.3	8.0	7.3	7.2	6.6	6.0	5.9	6.1	5.7	5.9

## One Minute Volatility Bps

firstHalfHour	13.9	17.6	19.6	13.1	12.1	12.1	22.2	18.1	15.5	13.6	16.3	19.6	35.0	27.5	19.4	17.9	19.2	31.2	24.8	22.4	19.3	22.7
midday	5.8	8.8	10.3	5.5	4.5	4.7	11.5	8.5	7.1	5.9	7.4	9.4	15.2	14.9	9.1	8.4	9.2	15.2	11.8	10.9	9.6	11.2
lastHalfHour	5.6	7.0	8.5	5.0	4.9	4.5	10.1	7.3	6.7	5.7	6.6	8.2	12.5	12.7	8.0	7.9	8.1	12.2	10.0	9.8	8.3	8.8

## Quotesize in Shares

firstHalfHour	39K	39K	34K	35K	40K	43K	37K	33K	26K	30K	31K	10K	11K	10K	11K	11K	11K	10K	8K	7K	8K	8K
midday	47K	43K	37K	46K	51K	54K	39K	38K	31K	33K	35K	12K	12K	10K	12K	12K	12K	10K	9K	8K	9K	9K
lastHalfHour	63K	62K	54K	68K	66K	68K	54K	50K	42K	44K	47K	16K	15K	14K	18K	18K	17K	14K	12K	11K	12K	12K

Median used for all metrics

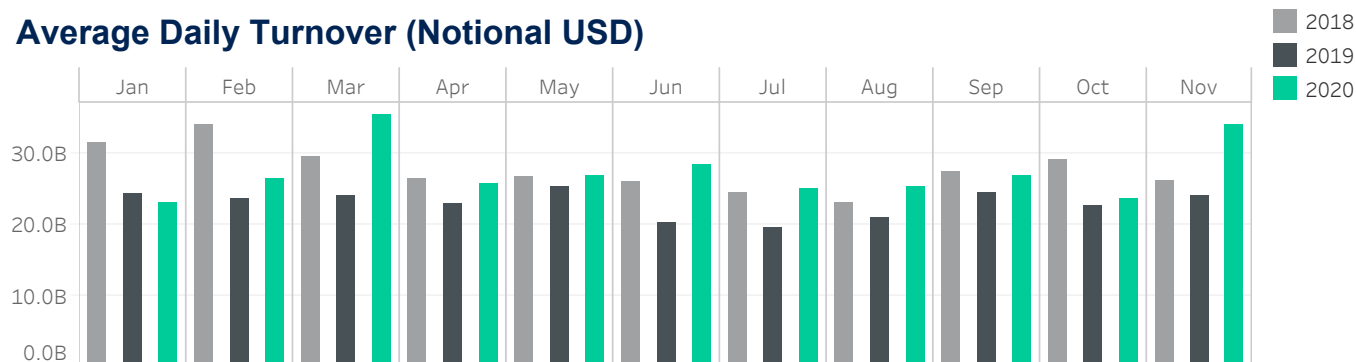
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

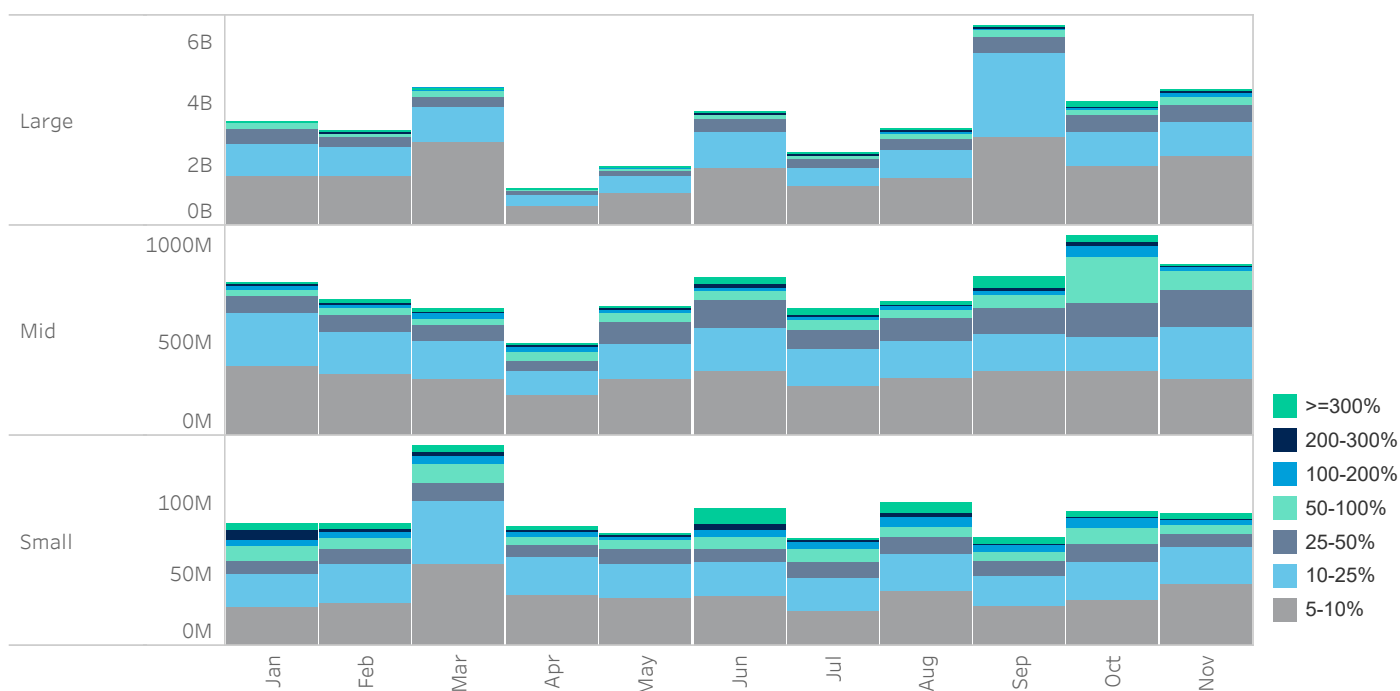


# Japan

## Average Daily Turnover (Notional USD)



## Trade Size Distribution by Market Cap and %ADT (Notional USD)



## Market Structure News

### TSE's CONNEQTOR Platform Accepting Applications

On 20 November, the Tokyo Stock Exchange (TSE) announced that it is accepting institutional investor applications for the use of its new CONNEQTOR request-for-quote (RFQ) platform for ETFs. The new platform will allow investors to submit RFQs for a particular ETF to a large number of market makers. The TSE has been developing the platform since May 2020 with the aim of improving liquidity and pricing in Japanese ETFs.

The seven brokers currently enabled on the platform are: SMBC Nikko Securities Inc., Goldman Sachs Japan Co., Ltd., JPMorgan Securities Japan Co., Ltd., Daiwa Securities Co. Ltd., Nomura Securities Co., Ltd. MARUSAN SECURITIES CO., LTD., and Mitsubishi UFJ Morgan Stanley Securities.

Originally scheduled for December 2020, the official launch of the platform is now expected to be in early 2021.

<https://www.jpex.co.jp/english/corporate/news/news-releases/0060/20201029-01.html>

Source data: Virtu Financial



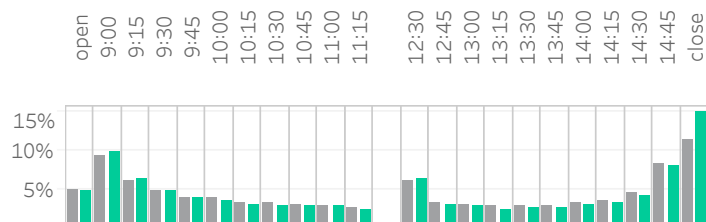


# Japan

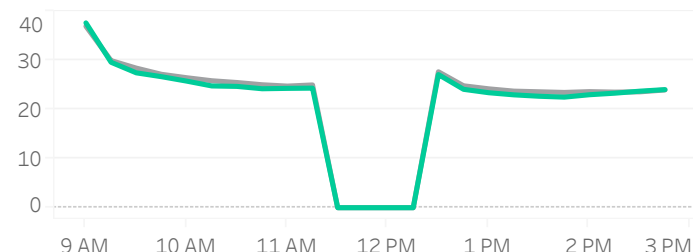
## Market Microstructure Observations

- November closing auction contributed 15% of full day volume (11% is the YTD average)
- The second highest monthly turnover observed so far in 2020 at \$33.9B (previous high was March at \$35.4B)
- Intraday spreads were inline with YTD averages but were at their highest since July 2020

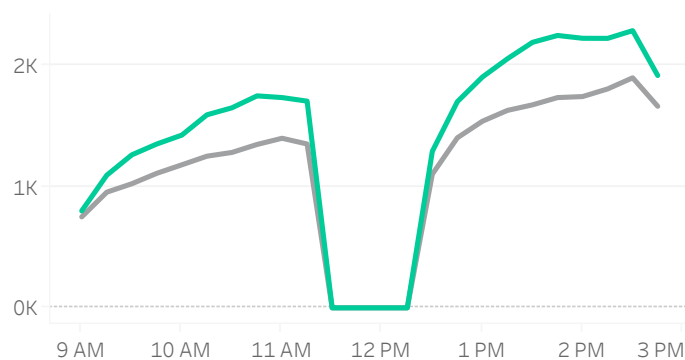
### Volume Curve



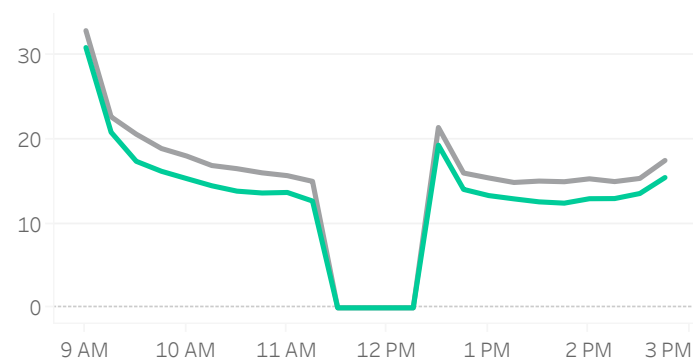
### Intraday Spread (bps)



### Intraday Quotesize (Shares)



### Intraday Volatility (bps)



■ YTD ■ November

### Spread Bps

	20 Q1			20 Q2			20 Q3			20 Q4	
	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20
firstHalfHour	24.0	26.3	46.3	37.5	32.3	30.0	30.5	30.9	29.5	29.7	32.0
midday	20.0	21.2	32.3	27.8	24.7	24.0	24.2	23.3	23.0	23.2	24.1
lastHalfHour	18.8	19.7	29.2	26.3	23.5	23.2	23.2	22.6	22.2	22.1	23.4

### One Minute Volatility Bps

firstHalfHour	12.6	16.8	38.8	28.0	21.5	19.6	19.0	18.8	15.2	16.1	18.8
midday	6.1	8.2	19.9	12.6	9.9	9.9	8.3	7.5	6.6	6.8	7.8
lastHalfHour	6.4	6.5	18.7	13.7	9.8	9.2	7.3	7.1	6.5	7.0	7.3

### Quotesize in Shares

firstHalfHour	1,206	961	565	650	825	957	1,009	990	1,091	1,089	988
midday	2,291	1,716	784	1,028	1,385	1,498	1,673	1,754	1,896	1,940	1,774
lastHalfHour	3,304	2,699	1,000	1,147	1,700	1,917	2,195	2,435	2,468	2,548	2,214

Median used for all metrics

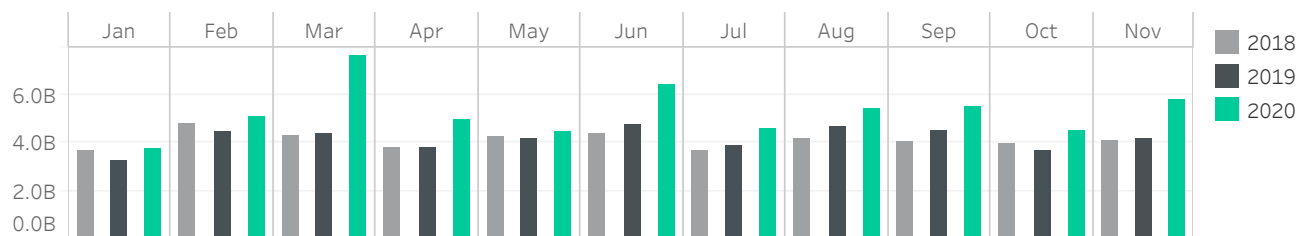
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

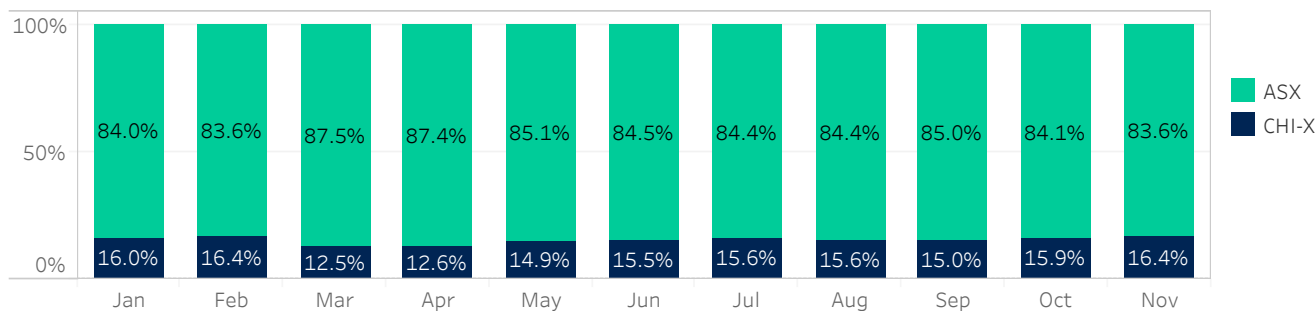


# Australia

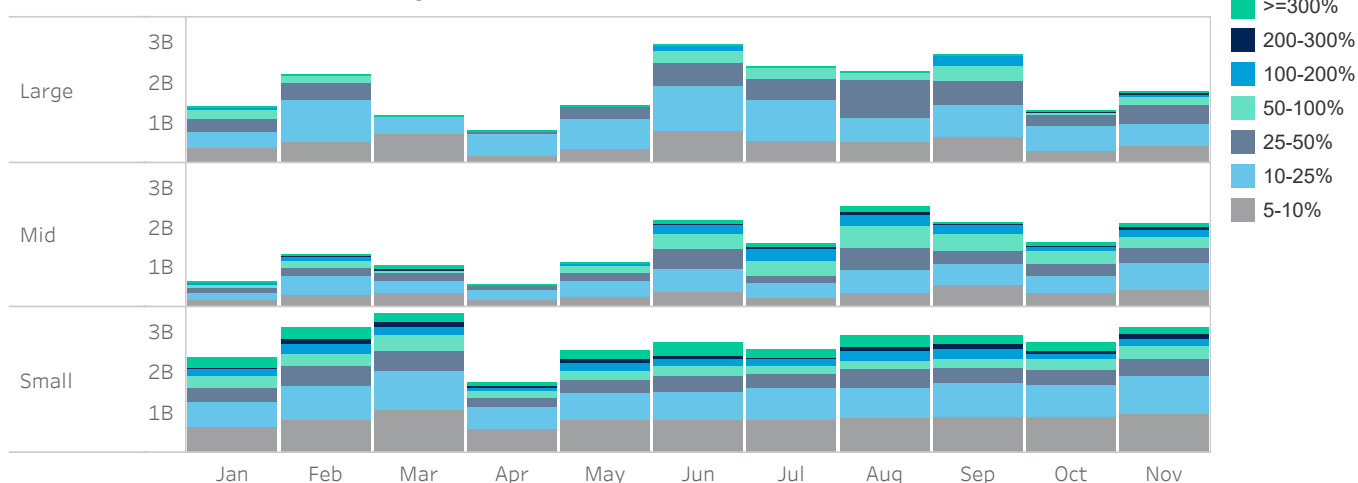
## Average Daily Turnover (Notional USD)



## Venue Market Share (Notional USD)



## Trade Size Distribution by Market Cap and %ADT (Notional USD)



### Market Structure News

#### ASX Trade Outage

On 16 November, trading on the Australian Stock Exchange (ASX) was halted due to market data issues during the opening auction. The exchange did not reopen that day and the issues were later confirmed to be the result of a software issue related to the new trade platform, ASX Trade, launched that day. The Chi-X market remained open to trade ASX listed equities, Chi-X quoted ETFs and TraCRs.

In a press release on 23 November, ASX confirmed that the Australian Securities and Investment Commission (ASIC) would conduct an investigation into the outage.

<https://www.zdnet.com/article/asx-claims-market-data-issues-in-trade-pause/>

<https://asic.gov.au/about-asic/news-centre/find-a-media-release/2020-releases/20..>

#### Active ETFs on the Rise in Australia

In a bid to broaden their distribution channels and include retail investment, ASX shared that they see more active managers choosing to list ETF products. ASIC has encouraged this with certain allowances, such as active managers not having to reveal their underlying portfolios and not being required to hire market makers.

<https://www.efstream.com/news/asx-active-etfs-see-more-interest-than-passive/>

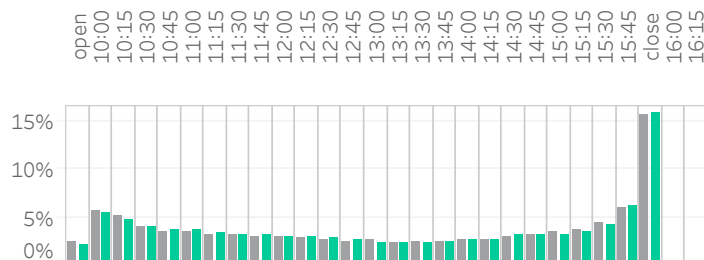


# Australia

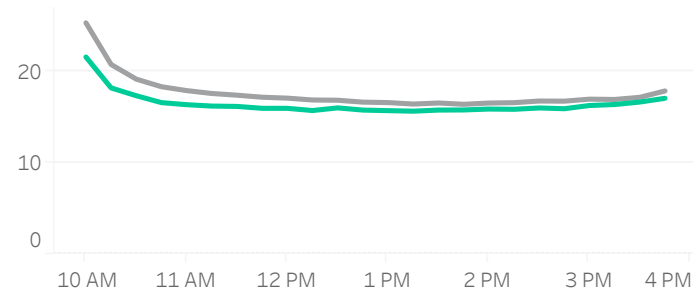
## Market Microstructure Observations

- Venue market share remained steady with Chi-X representing 15% of the market
- Volume in the closing auction remained significant at 16% of daily turnover and was up on the YTD average
- Spreads have continued to fall steadily month over month since March

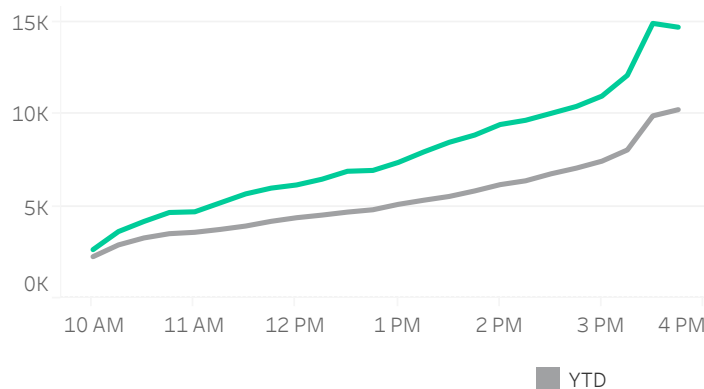
## Volume Curve



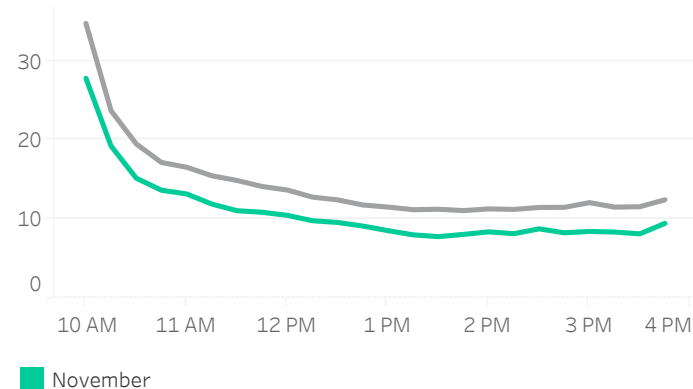
## Intraday Spread (bps)



## Intraday Quotesize (Shares)



## Intraday Volatility (bps)



## Spread Bps

	20 Q1			20 Q2			20 Q3			20 Q4	
	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20
firstHalfHour	14.7	17.3	34.7	29.5	24.8	23.4	21.9	20.8	20.8	19.9	19.5
midday	11.8	12.5	24.4	21.2	18.6	17.4	16.8	16.5	16.9	15.2	16.0
lastHalfHour	12.3	12.9	24.7	21.1	18.8	17.7	17.5	17.2	17.8	16.8	16.7

## One Minute Volatility Bps

firstHalfHour	12.6	17.0	46.1	36.3	28.7	28.3	22.9	22.6	21.5	17.7	18.4
midday	4.5	5.4	21.0	12.0	7.5	7.7	5.9	5.5	5.5	5.0	5.1
lastHalfHour	2.6	4.1	25.3	11.0	6.0	5.9	5.1	4.3	5.3	4.4	4.3

## Quotesize in Shares

firstHalfHour	2,000	2,168	2,263	2,016	2,725	2,888	3,002	3,135	3,551	3,258	3,208
midday	5,574	5,361	3,201	3,607	5,150	5,272	5,034	6,228	6,892	6,767	7,424
lastHalfHour	10,891	11,471	5,275	6,698	9,919	10,262	11,468	13,092	14,938	15,112	15,132

Median used for all metrics

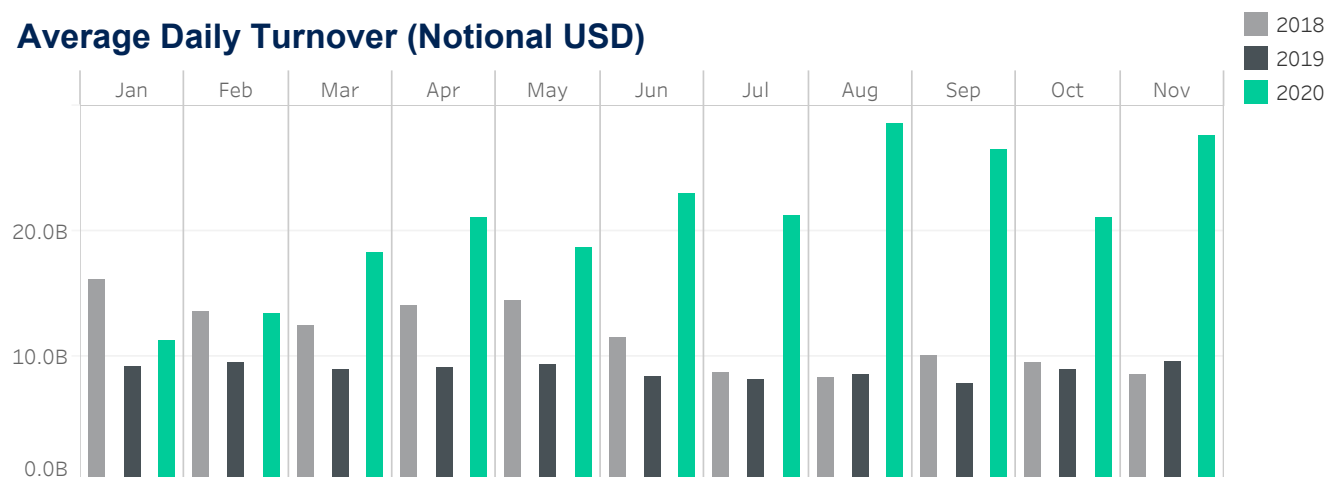
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

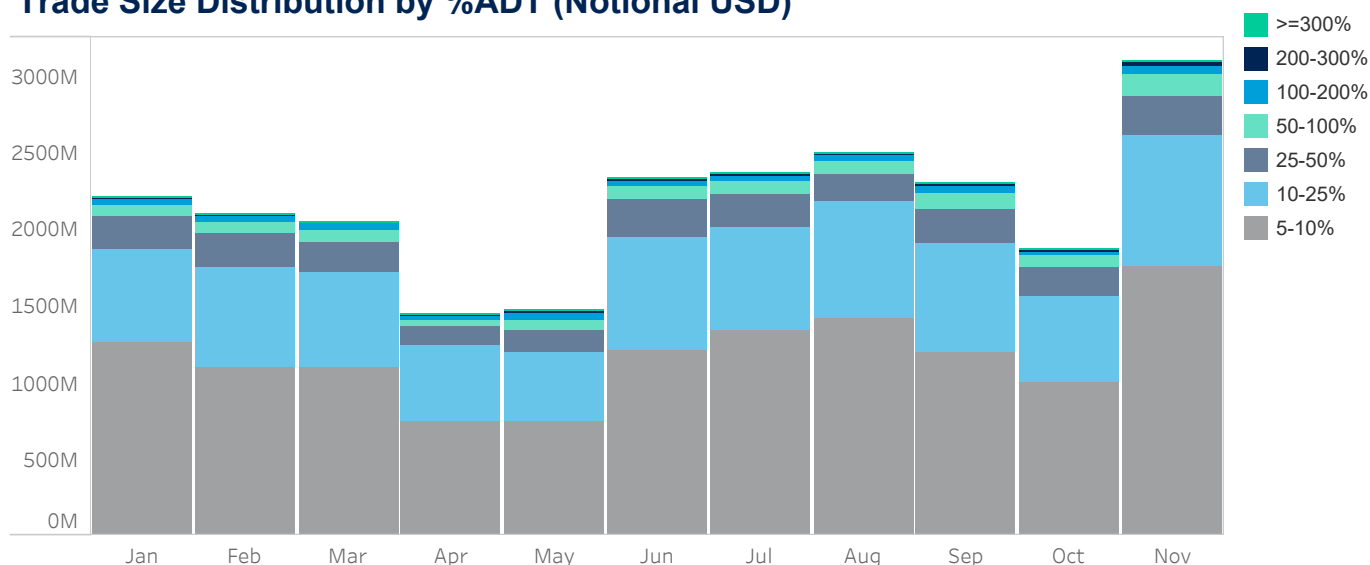


## South Korea

### Average Daily Turnover (Notional USD)



### Trade Size Distribution by %ADT (Notional USD)



### Market Structure News

#### KOSPI and KOSDAQ Sets Historic Total Market Capitalization

On 11 November, the combined market capitalization of the Korea Composite Stock Price Index (KOSPI) and the Korean Securities Dealers Automatic Quotation (KOSDAQ) hit a historical high of KRW2,032T(US\$1.87T), which surpassed the previous high of KRW2,019T (US\$1.86T) on 29 January 2018. Respective market capitalization of the KOSPI and KOSDAQ markets was KRW1,703T(US\$1.57T) and KRW328T(US\$300B).

The projection of Joe Biden's presidency prompted the appreciation of the KRW and significant inflow of investment funds. As of 10 November, the KRW appreciated 1.8% and reached a two-year high of KRW1,110/US\$1 the next day. Inflow of foreign funds stood at KRW3.3T(US\$3B) since November.

<https://global.krx.co.kr/contents/GLB/02/0203/0203000000/GLB0203000000.jsp#ab8758eced0475769e200e7e309baf77=1&view=20575>

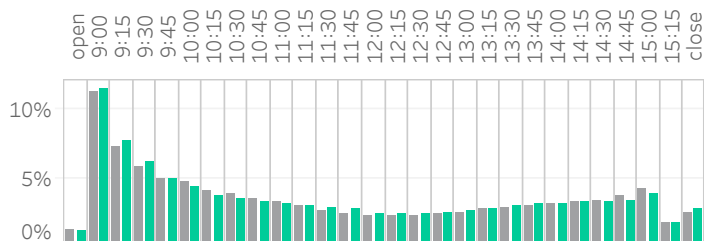


# South Korea

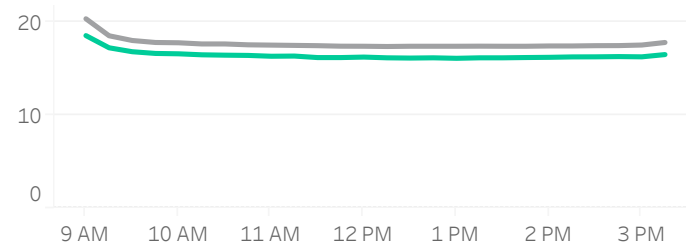
## Market Microstructure Observations

- Monthly turnover was up 30% from October at \$27.5B
- Volume curve remained heavily skewed towards the morning with 27% of the day's volume executing in the first 30 minutes of the day
- Intraday volatility and spreads consistently traced below the YTD averages

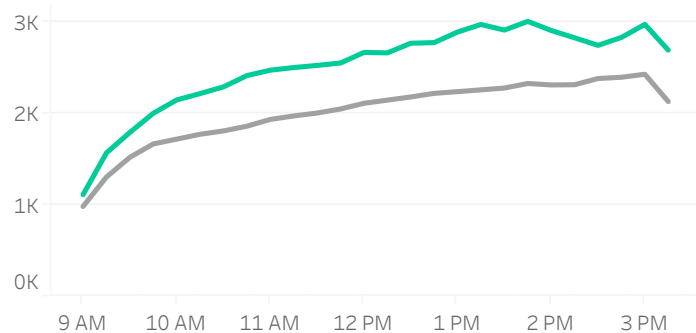
### Volume Curve



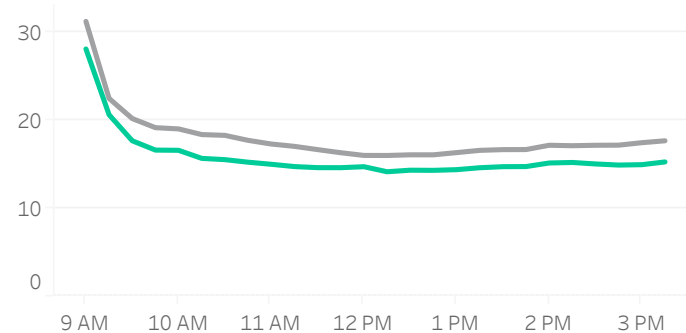
### Intraday Spread (bps)



### Intraday Quotesize (Shares)



### Intraday Volatility (bps)



■ YTD ■ November

### Spread Bps

	20 Q1			20 Q2			20 Q3			20 Q4	
	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20
firstHalfHour	18.4	19.3	23.6	20.1	18.6	18.9	18.8	18.3	18.1	17.9	17.6
midday	17.2	17.5	19.4	18.3	17.5	17.5	17.6	16.8	17.0	17.0	16.3
lastHalfHour	17.2	17.5	19.7	18.5	17.6	17.5	17.6	16.8	17.1	17.1	16.3

### One Minute Volatility Bps

firstHalfHour	13.9	15.8	31.4	20.7	15.9	18.0	16.1	19.3	16.8	15.2	15.6
midday	10.9	11.9	17.3	12.1	11.2	11.7	10.9	12.0	11.0	11.0	10.8
lastHalfHour	13.9	16.9	22.1	12.7	13.3	13.0	13.8	15.1	13.3	14.2	15.3

### Quotesize in Shares

firstHalfHour	1,149	1,048	726	993	1,382	1,341	1,305	1,359	1,196	1,069	1,368
midday	2,571	2,265	1,159	1,602	2,319	2,203	2,439	2,353	2,254	2,043	2,618
lastHalfHour	2,930	2,757	1,250	1,798	2,778	2,707	2,771	2,918	2,670	2,400	3,099

Median used for all metrics

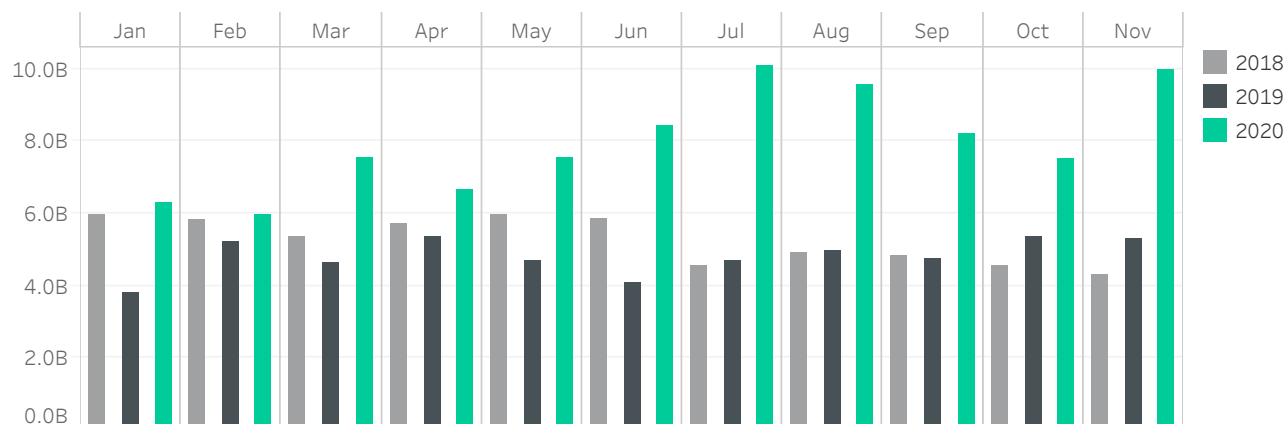
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

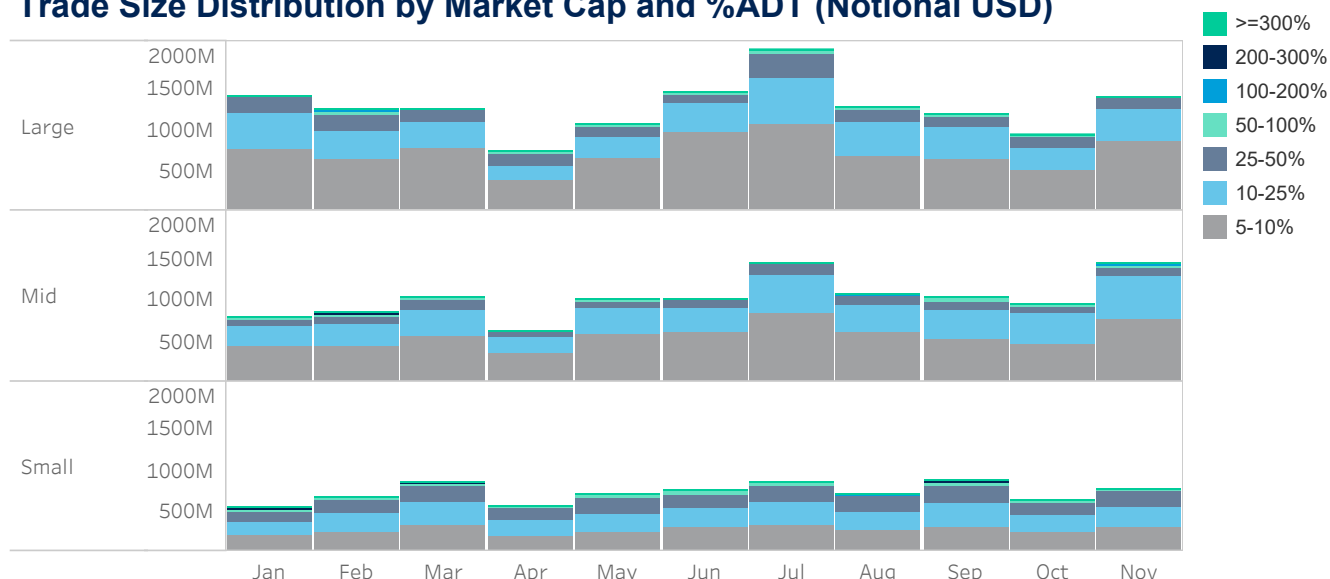


# Taiwan

## Average Daily Turnover (Notional USD)



## Trade Size Distribution by Market Cap and %ADT (Notional USD)



## Market Structure News

### Intraday Odd-lot Trading Introduced

The Taiwan Stock Exchange (TWSE) commenced intraday odd-lot trading on 26 October 2020. Compared to the standard unit of trading, which is commonly denoted by 1,000 shares, odd-lot trades allow investors to purchase between 1 and 999 shares. As a result, this lowers the capital threshold required for small investors to buy high-priced stocks.

According to national newspaper, the Taipei Times, 46,164 odd-lot transactions worth NT\$363M (US\$12.56M) were recorded on 26 October, accounting for 0.22 percent of the Taiwan Capitalization Weighed Stock Index's (TAIEX) total turnover. Moreover, odd-lot traders bought a total of 4.31M shares, or 94 shares per transaction on average that day.

Taiwan Semiconductor Manufacturing Company (TSMC) was the most popular among odd-lot traders, with 266,041 shares traded at launch. However, odd lot turnover for TSMC merely made up 1% of its regular trading turnover, "a sign that many investors are still on the sideline", according to TWSE Trading Division Director, Ben Chen.

<https://www.regulationasia.com/taiwan-stock-exchange-launches-intraday-odd-lot-trading/>  
<https://www.taipetimes.com/News/biz/archives/2020/10/27/2003745842>

Source data: Virtu Financial

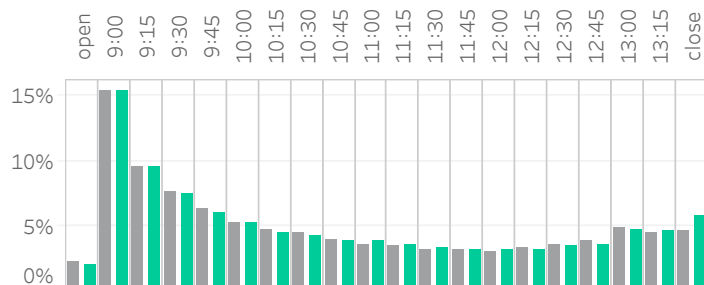


# Taiwan

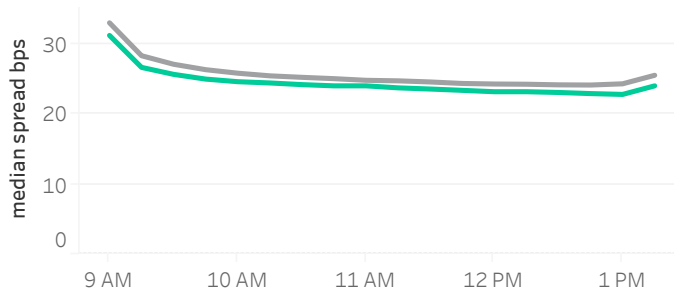
## Market Microstructure Observations

- November turnover was the 2nd highest so far in 2020 at \$10.0B (Previous high was \$10.1B in July)
- Intraday spread levels matched closely with the YTD averages
- Quotesize throughout continuous trading was highest so far in 2020

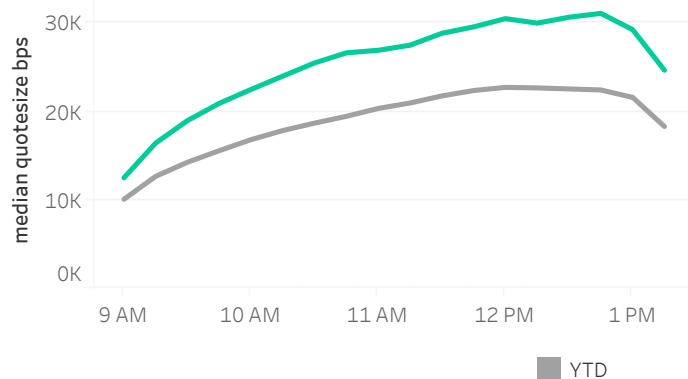
### Volume Curve



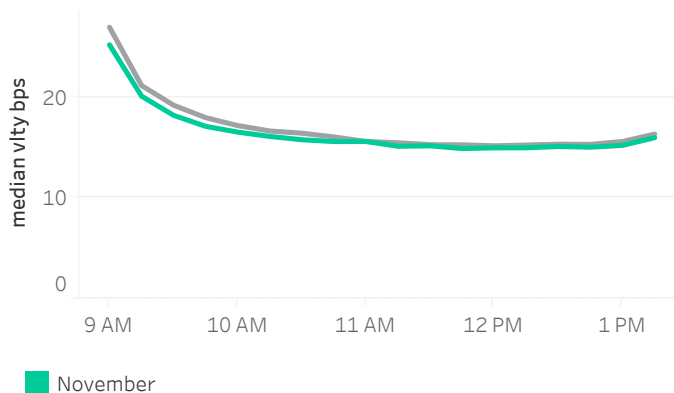
### Intraday Spread (bps)



### Intraday Quotesize (Shares)



### Intraday Volatility (bps)



### Spread Bps

	20 Q1			20 Q2			20 Q3			20 Q4	
	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20
firstHalfHour	27.1	27.7	34.0	30.4	28.7	28.4	29.4	29.4	31.0	29.0	28.0
midday	23.0	23.5	27.2	25.3	24.7	24.0	24.4	24.6	25.7	24.7	23.8
lastHalfHour	23.2	23.9	27.6	25.4	24.8	23.8	24.2	24.0	25.1	24.9	23.4

### One Minute Volatility Bps

firstHalfHour	11.1	11.8	19.4	15.5	13.6	12.6	14.5	15.4	15.4	12.6	12.4
midday	6.7	6.9	8.6	7.2	7.0	6.5	6.9	7.4	7.4	6.6	6.3
lastHalfHour	8.0	11.0	9.9	7.5	7.6	8.6	7.5	9.2	10.2	10.3	11.0

### Quotesize in Shares

firstHalfHour	12,999	11,187	8,443	10,140	11,812	12,992	12,340	12,131	12,498	13,333	14,756
midday	25,000	22,035	13,167	17,000	19,599	23,257	20,536	21,179	21,893	24,798	26,988
lastHalfHour	24,545	20,932	12,200	16,473	19,203	23,096	21,248	21,921	22,480	23,059	27,157

Median used for all metrics

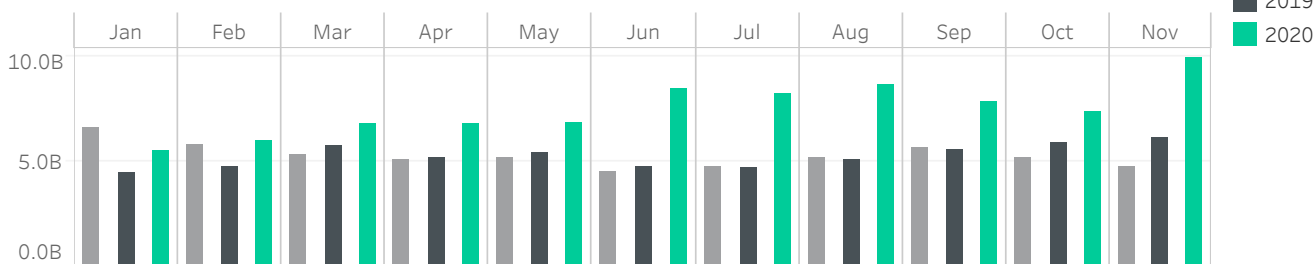
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

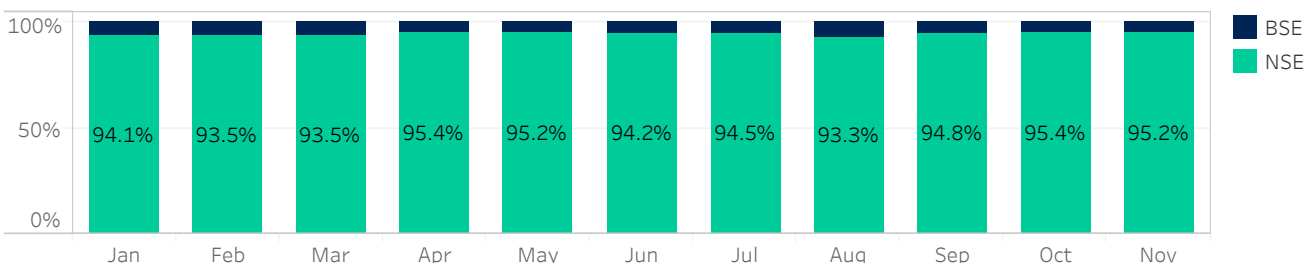


# India

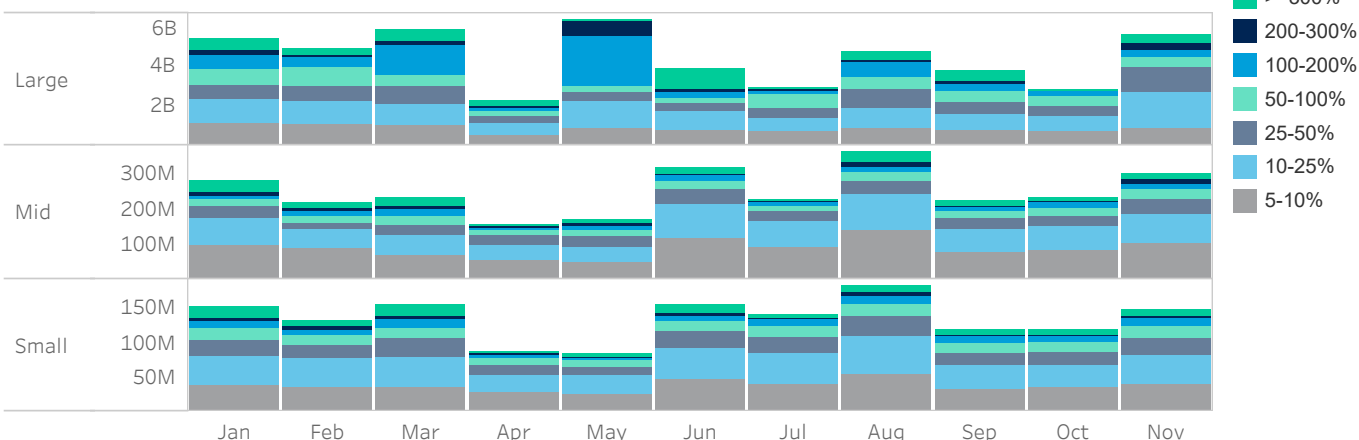
## Average Daily Turnover (Notional USD)



## Venue Market Share (Notional USD)



## Trade Size Distribution by Market Cap and %ADT (Notional USD)



### Market Structure News

#### Overseas Investment Limit Increases for Mutual Funds and ETFs

On 5 November, the Security and Exchange Board of India (SEBI) doubled the foreign investment limit for mutual funds from US\$300M to US\$600M. The foreign investment limit for overseas ETFs also increased from US\$50M to US\$200M per fund. Aggregate industry caps for these limits remain at US\$7B and US\$1B respectively.

In addition, US\$50M would be reserved for foreign investments per mutual fund, within the overall industry limit of US\$7B. Any New Fund Offer (NFO) that intends to invest in overseas securities must disclose their foreign investment amount within updated limits. For ongoing funds, the regulator specified an investment headroom of 20% AUM for overseas securities in the last three months, subject to the updated overall limit of US\$600M.

<https://economictimes.indiatimes.com/mf/mf-news/sebi-doubles-overseas-investment-limits-for-mutual-funds/articleshow/79073409.cms?from=mdr>

#### A Historic High in Stock Markets after Biden's Win

On 9 November, two major Indian benchmark indices— Sensex and Nifty rallied to record highs. Sparsh Chhabram, an economist with Mumbai-based Centrum Broking, commented that the rally was "mostly supported by the optimism that Biden's win will instill confidence amongst investors by reducing 'policy uncertainty.'" Indian IT companies were the biggest gainers, cheering Biden's win— they receive almost 70% of their revenue from the North American region despite the imposition of numerous protectionist measures by the Trump administration.

<https://qz.com/india/1930080/indias-bse-sensex-nifty-50-at-all-time-high-on-joe-biden-win/>



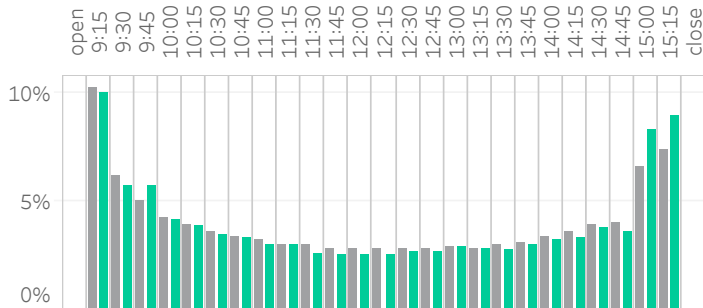
# India



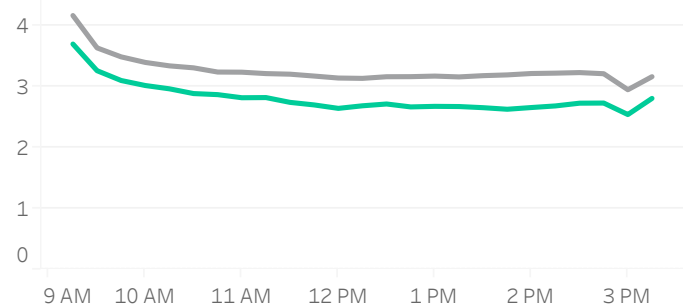
## Market Microstructure Observations

- Turnover highest so far in 2020 at \$9.9B, up 15% from the previous high in August
- Volume curve remained heavily skewed towards the morning with 17% of the day's volume executing in the first 30 minutes of the day
- Spreads, volatility and quotesize decreased consistently month over month since September

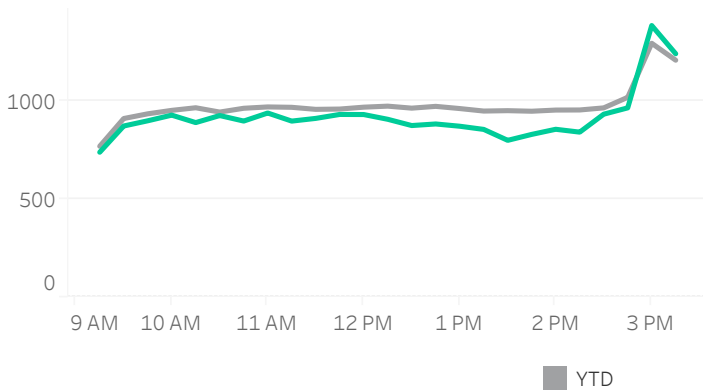
### Volume Curve



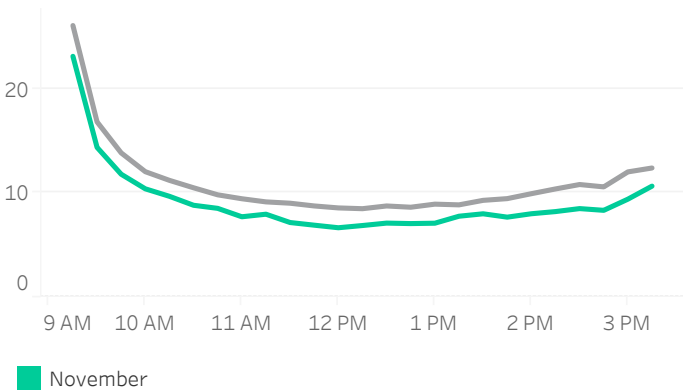
### Intraday Spread (bps)



### Intraday Quotesize (Shares)



### Intraday Volatility (bps)



### Spread Bps

	20 Q1			20 Q2			20 Q3			20 Q4	
	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20
firstHalfHour	3.0	3.7	6.0	5.3	4.1	3.6	3.6	3.3	3.6	3.4	3.4
midday	2.5	3.1	4.8	4.1	3.4	3.2	3.1	2.8	3.1	3.0	2.7
lastHalfHour	2.5	2.9	4.3	3.7	3.2	3.0	2.8	2.7	2.9	2.7	2.6

### One Minute Volatility Bps

firstHalfHour	12.3	15.9	40.9	30.3	24.1	20.7	17.4	15.5	19.2	16.9	16.6
midday	5.5	7.8	21.7	13.9	11.0	10.5	7.6	6.3	8.5	7.4	7.3
lastHalfHour	8.3	11.1	27.6	16.2	12.2	12.2	9.7	8.9	11.9	9.5	9.4

### Quotesize in Shares

firstHalfHour	890	887	550	654	807	927	1,056	1,014	888	860	814
midday	973	957	602	833	990	1,036	1,215	1,116	984	947	892
lastHalfHour	1,248	1,265	894	1,098	1,221	1,313	1,406	1,396	1,262	1,157	1,220

Median used for all metrics

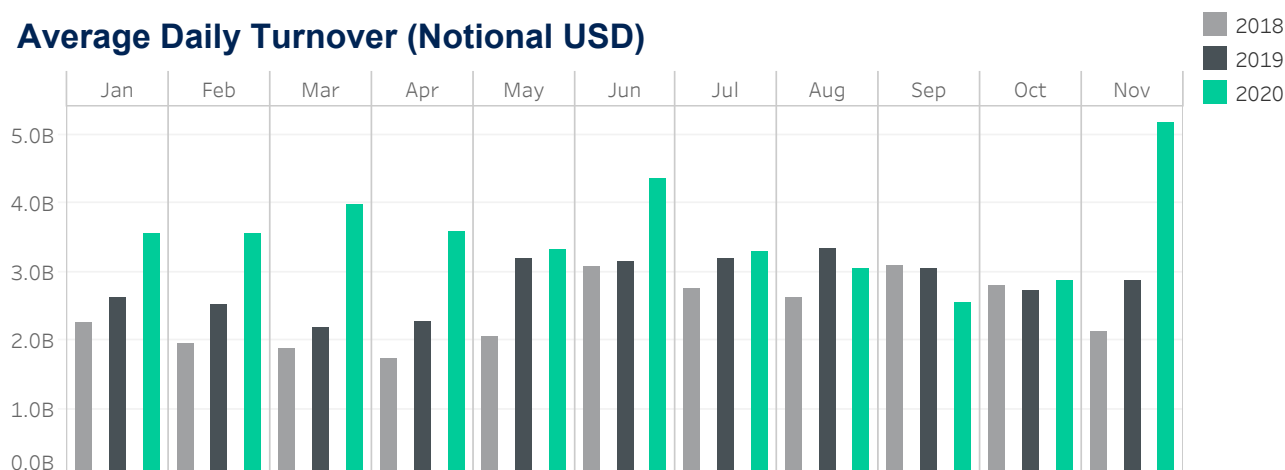
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

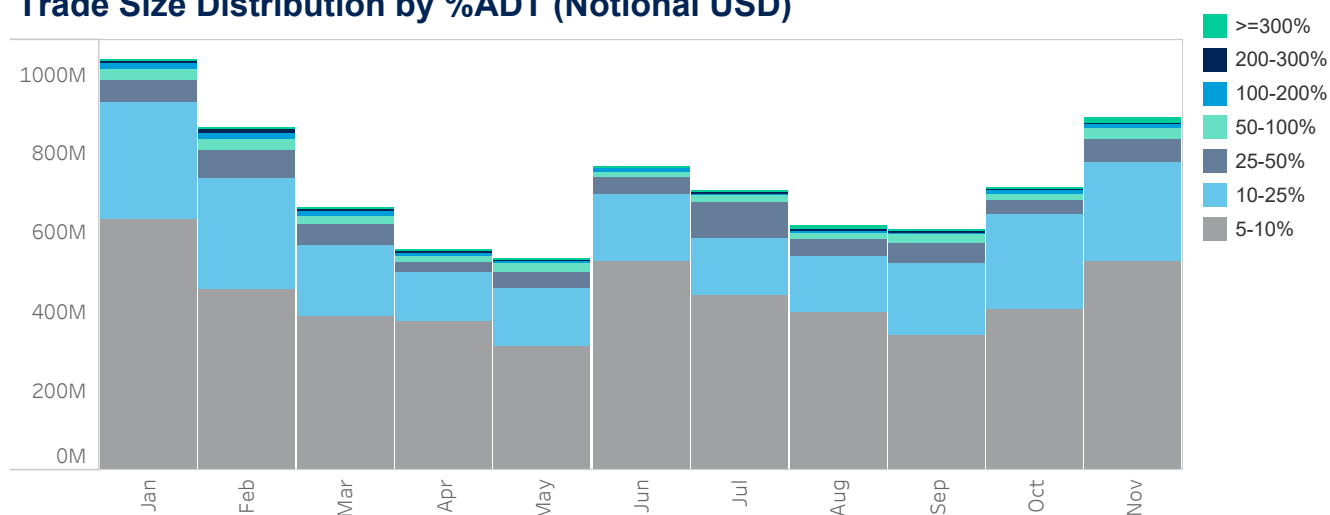


# Thailand

## Average Daily Turnover (Notional USD)



## Trade Size Distribution by %ADT (Notional USD)



## Market Structure News

### Revised Net Capital Rules to Support Liquidity and Grow Digital Businesses

The Thai Securities and Exchange Commission (SEC) revised net capital (NC) requirements for brokerages and securities firms in bid to support liquidity raising and growth of new digital businesses. These changes come after sharp increases in recent trading activity that were amplified by the US elections. Namely, SET daily trading value reached THB166B (US\$5.5B) and over 1M futures contracts per day on the Thailand Futures Exchange—a threefold increase in trading volume across both exchanges year to date.

According to national newspaper, The Bangkok Post, the revised NC criteria allows for increasing the use of subordinated loans to replace the maintenance of net capital funds when securities or futures transactions jump sharply. In addition, the SEC will allow digital securities to be accounted as capital funds, despite the maximum amount calculable for digital assets to a firm's NC is 50% of the asset value.

Thailand has recently pushed the adoption of digital assets, prompted by the launch of a new blockchain-enabled platform for government bonds as well as a plan to move judicial information into a blockchain storage network.

<https://www.set.or.th/set/newsdetails.do?newsId=16006449139340&sequence=2020106456&language=en&country=US>

Source data: Virtu Financial

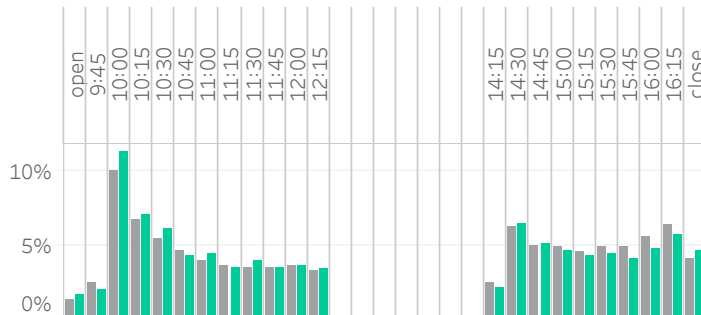
# Thailand



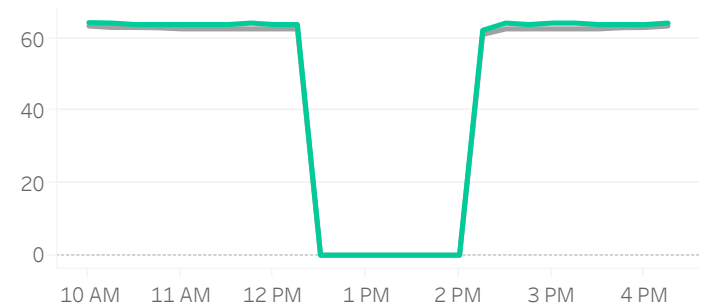
## Market Microstructure Observations

- Turnover highest so far in 2020 at \$5.B, up 80% from October and 18% from the previous high in June
- Volume curve still heavily skewed towards the morning with 18% of the day's volume executing in the first 30 minutes of the day
- Quotesize throughout continuous trading was at their highest so far in 2020

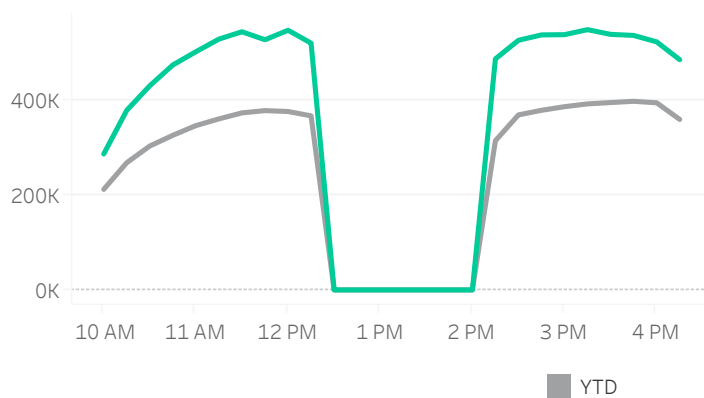
## Volume Curve



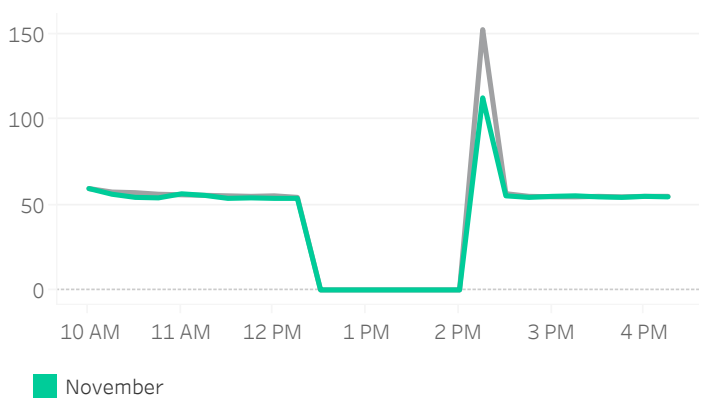
## Intraday Spread (bps)



## Intraday Quotesize (Shares)



## Intraday Volatility (bps)



## Spread Bps

	20 Q1			20 Q2			20 Q3			20 Q4	
	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20
firstHalfHour	61.5	61.3	67.6	64.8	62.7	62.1	63.2	62.7	64.5	66.0	64.9
midday	60.5	60.2	65.6	64.1	62.1	61.9	62.8	62.1	63.7	65.5	64.3
lastHalfHour	61.5	61.5	66.1	64.5	62.3	62.1	62.9	62.5	64.6	66.0	64.5

## One Minute Volatility Bps

firstHalfHour	173.2	40.5	45.8	36.2	186.1	163.7	177.5	200.0	203.2	182.9	48.1
midday	163.6	176.3	41.7	175.6	174.2	180.9	180.5	185.2	191.7	186.6	169.5
lastHalfHour			24.1	30.0							

## Quotesize in Shares

firstHalfHour	225,662	187,087	107,655	181,870	252,338	281,291	322,489	295,460	262,933	249,775	304,860
midday	385,999	325,034	179,722	291,686	408,834	473,118	494,657	479,032	441,342	410,387	519,714
lastHalfHour	398,132	327,422	179,927	306,812	424,516	450,694	502,118	498,373	431,692	423,223	502,252

Median used for all metrics

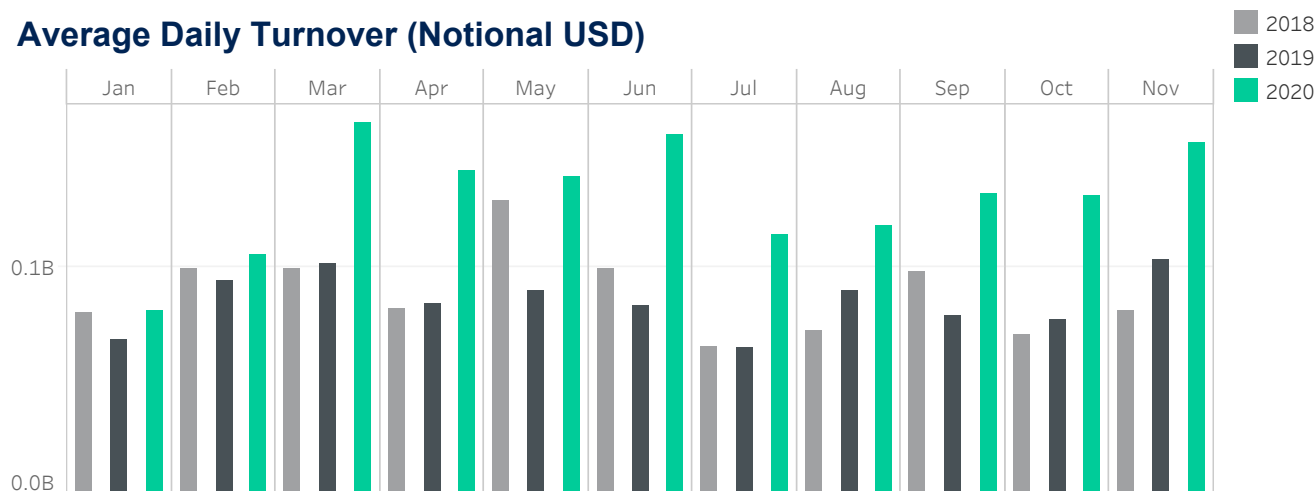
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

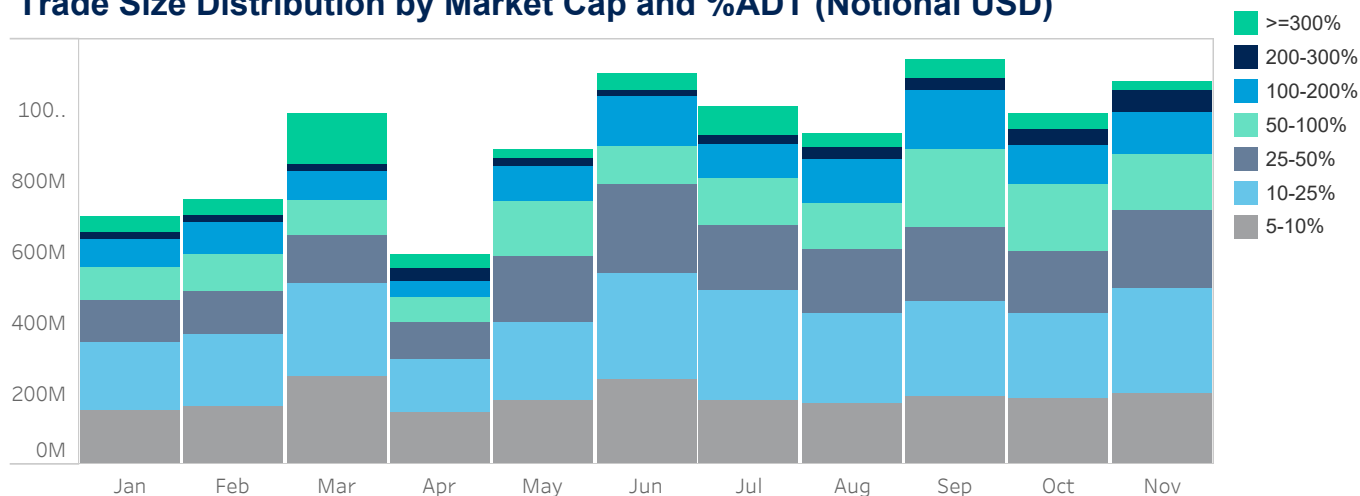


# New Zealand

## Average Daily Turnover (Notional USD)



## Trade Size Distribution by Market Cap and %ADT (Notional USD)



### Market Structure News

#### NZX Benefits from Increased Market Activity

Share price in NZX, the operator of the New Zealand Stock Exchange, reached a historical high of NZ\$1.92 (US\$1.35) this month and gained over 39% this year. In the first half of 2020, NZX's profits jumped 41% to NZ\$9.1M(US\$6.4M).

As COVID-19 continues to bring uncertainty to global markets, firms are seeking cash and capital to protect and grow their businesses. The total value of capital raised at the end of October increased 0.2% to NZ\$13.8B (US\$9.7B). Roughly 65% or NZ\$8.9B (US\$6.3B) of that was secondary equity capital, which is up 32% from last year.

NZX's first IPO listing in 2020 occurred on 31 March, with Me Today, a supplement and skincare company which raised NZ\$1.5M(US\$1M). IPO activities ramped up in the second half of year with Rua Bioscience at NZ\$20M(US\$14M) and online lender Harmony's dual listing on NZX and the Australian Securities Exchange at NZ\$92.5M (US\$65M) on 20 November. In addition, NZX chief executive Mark Peterson commented "there might be a few more equity listings between now and Christmas". This flurry of activity is a contrast to 2019, when there were only two listings and to 2018, when there were no listings at all.

<https://www.stuff.co.nz/business/123447989/nzx-benefits-from-flurry-of-activity-as-companies-seek-ca..>

Source data: Virtu Financial

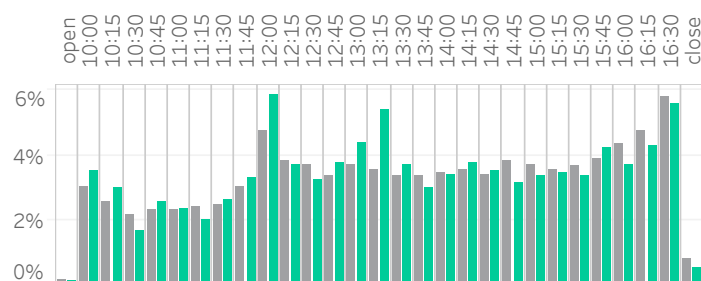


# New Zealand

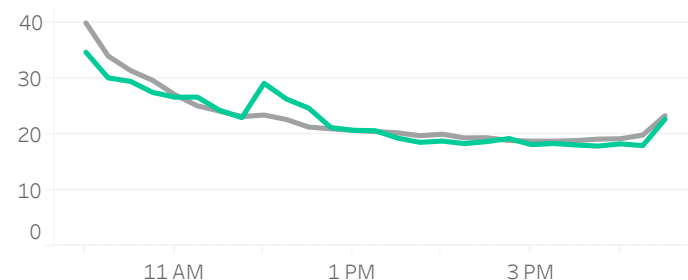
## Market Microstructure Observations

- Volumes in November at \$0.2B were up \$0.1B from October
- Volumes were skewed towards the second half of day with the closing auction trading 0.5% of full day volume (0.8% is the YTD average)
- Spreads and volatility for October fell versus the YTD averages

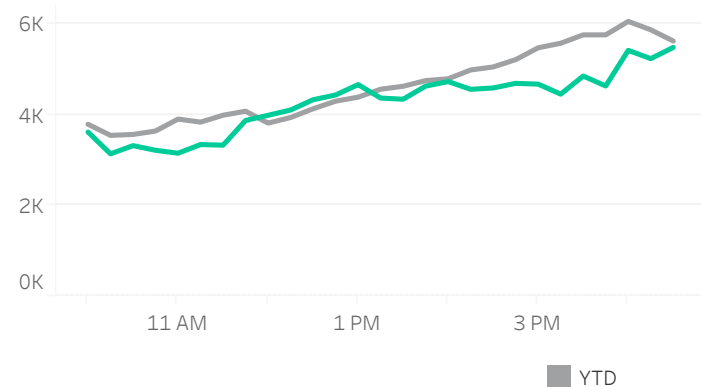
### Volume Curve



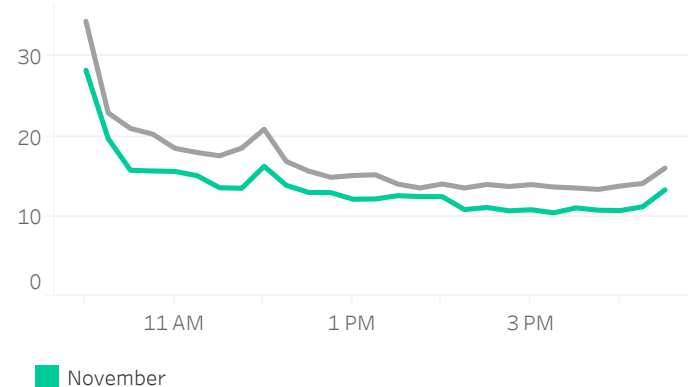
### Intraday Spread (bps)



### Intraday Quotesize (Shares)



### Intraday Volatility (bps)



### Spread Bps

	20 Q1			20 Q2			20 Q3			20 Q4	
	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20
firstHalfHour	32.3	35.5	62.9	43.2	39.8	34.9	32.4	29.9	29.1	33.0	31.6
midday	16.7	18.7	28.2	25.7	24.9	22.2	17.5	16.9	18.3	20.2	20.4
lastHalfHour	16.7	19.2	27.8	27.5	25.1	22.8	18.3	17.3	19.2	19.0	19.3

### One Minute Volatility Bps

firstHalfHour	10.2	11.2	19.3	10.7	10.6	10.1	8.4	6.8	8.3	7.2	6.8
midday	4.8	5.3	7.6	5.0	4.3	5.1	4.7	4.2	4.1	3.4	3.7
lastHalfHour	4.8	4.6	7.8	5.2	5.1	5.9	4.5	3.8	3.0	3.8	3.5

### Quotesize in Shares

firstHalfHour	3,541	3,833	4,391	4,440	4,306	3,387	3,585	3,668	2,707	3,225	3,302
midday	4,329	5,123	5,152	5,330	5,870	4,894	4,238	4,456	3,922	4,023	4,341
lastHalfHour	5,336	6,427	6,855	6,643	6,814	6,095	4,882	5,193	5,462	4,548	5,448

Median used for all metrics

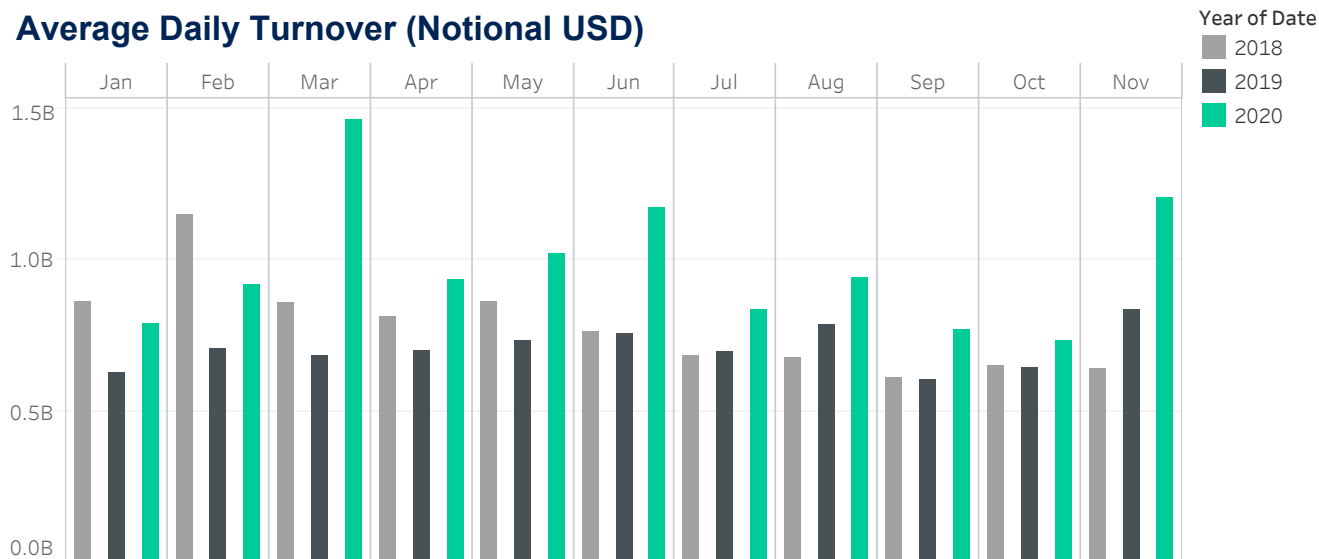
One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP

Source data: Virtu Financial

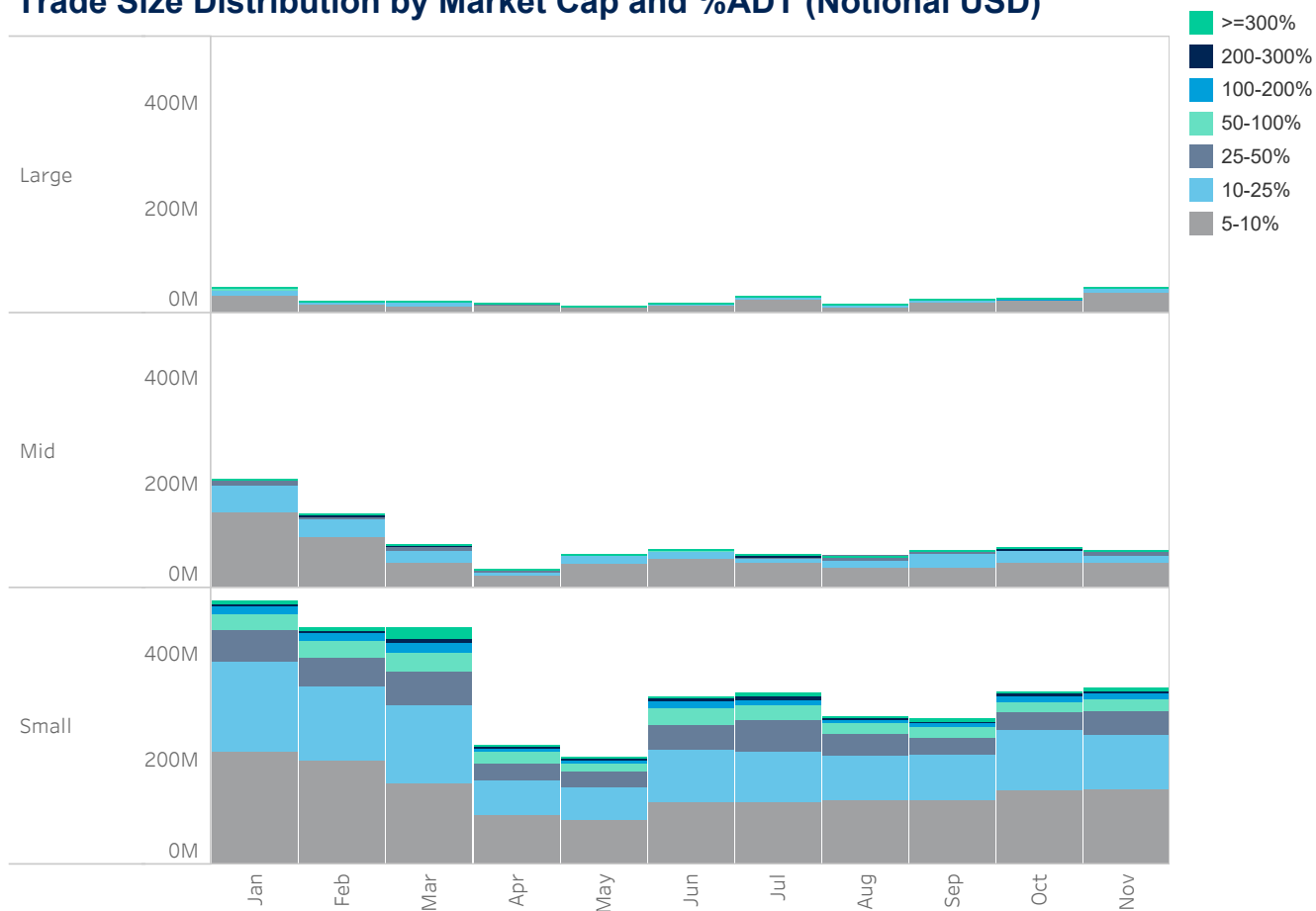


# Singapore

## Average Daily Turnover (Notional USD)



## Trade Size Distribution by Market Cap and %ADT (Notional USD)



Source data: Virtu Financial

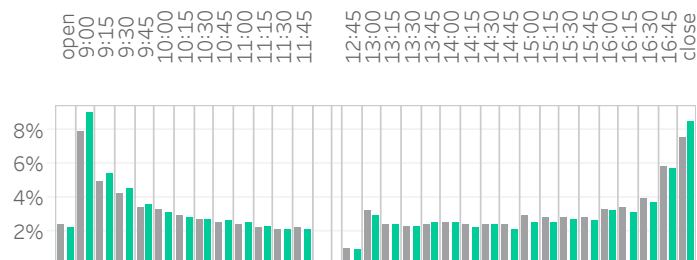


# Singapore

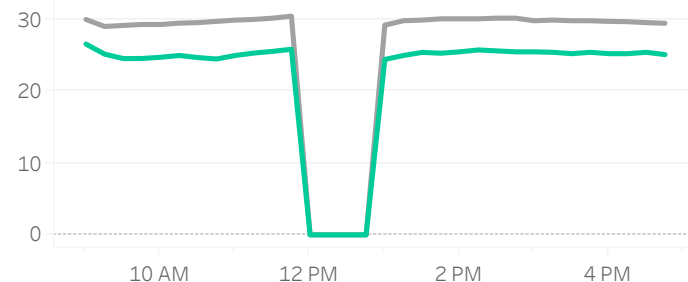
## Market Microstructure Observations

- November volumes were at the 2nd highest of 2020 at \$1.2B (Previous high was \$1.5B in March)
- Intraday spreads in November were back to pre-COVID levels at ~25bps
- Intraday volatility continued to fall though remained elevated versus Jan/Feb 2020 levels

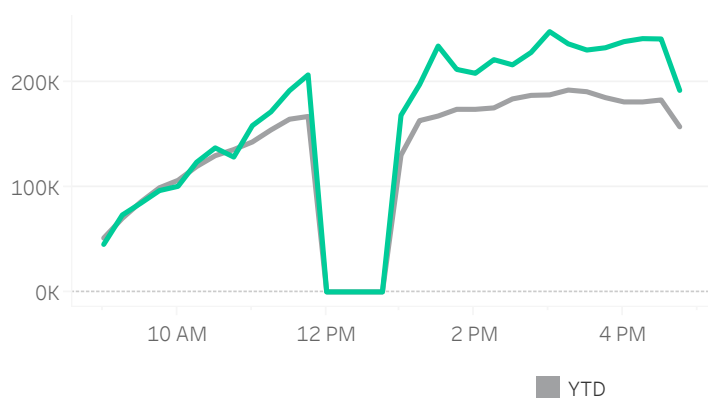
### Volume Curve



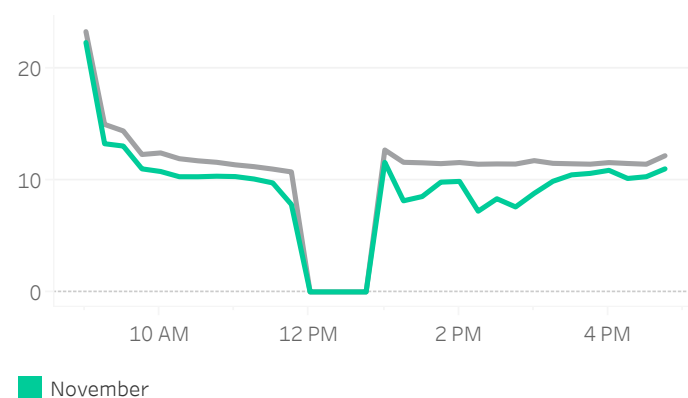
### Intraday Spread (bps)



### Intraday Quotesize (Shares)



### Intraday Volatility (bps)



### Spread Bps

	20 Q1			20 Q2			20 Q3			20 Q4	
	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20
firstHalfHour	24.3	24.7	32.9	34.1	33.7	28.4	28.2	27.6	28.6	28.0	25.5
midday	25.6	26.3	31.3	33.4	33.7	28.4	29.1	28.7	29.5	28.4	25.3
lastHalfHour	25.2	25.4	31.4	33.1	33.5	28.0	28.9	28.6	29.3	28.2	25.4

### One Minute Volatility Bps

firstHalfHour	5.6	6.0	16.7	11.2	10.1	7.1	7.2	7.3	5.4	5.8	8.7
midday	2.8	2.8	9.8	5.8	6.6	5.6	5.8	5.1	4.9	5.2	5.3
lastHalfHour	6.3	5.9	7.7	7.8	8.8	6.2	2.4	5.0	5.0	5.0	5.2

### Quotesize in Shares

firstHalfHour	63,676	67,472	49,102	53,452	86,640	64,925	59,611	57,709	64,203	64,266	60,875
midday	203,859	202,239	87,611	114,700	232,793	157,728	167,527	168,396	168,251	210,740	196,271
lastHalfHour	182,182	207,632	110,725	136,111	244,692	166,862	160,036	172,302	161,722	211,276	221,777

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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