

# Goldman Sachs Virtual Corporate Day Singapore Exchange Limited

January 2021

Singapore Exchange



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# Who we are

# Award-winning diversified exchange group

A diversified exchange group that runs key market infrastructure including the Singapore securities market and a pan-Asian derivatives exchange covering all major asset classes.

## Exchange of the Year

*FOW Asia Capital Markets Awards 2020*

## Asia-Pacific Derivatives Exchange of the Year

*GlobalCapital Global Derivatives Awards 2020*

## Best FX Exchange in Asia

*FX Markets Asia Awards 2020*

## Best Exchange for FX

*FX Markets e-FX Awards 2020*

## Exchange of the Year

*Regulation Asia Awards for Excellence 2020*

## Financial Metals Service Provider of the Year

*Standard & Poor Global Platts Awards 2019*

## Derivatives Exchange of the Year

*Asia Risk Awards 2019*

- High operating margin of 54% in FY2020
- High ROE of 40% and Operating cash flow of 58 cents per share
- Dividend of 30.5 cents per share in FY2020, going forward, annualised quarterly dividend will be 32 cents per share
- Most liquid international market for pan-Asian listed derivatives
- Most international exchange in Asia with 46% cross-border listings



## Anchored in Singapore, Asia's only AAA-rated economy

Reputation for good corporate governance, infrastructure, regulation and strength of the broader advisory ecosystem

# Our international footprint

Anchored in Singapore with global reach, serving a diverse set of international clients seeking Asian opportunities.



Our offices:

Beijing	Chicago	Hong Kong	London	Mumbai
New York	San Francisco	Shanghai	Singapore	Tokyo

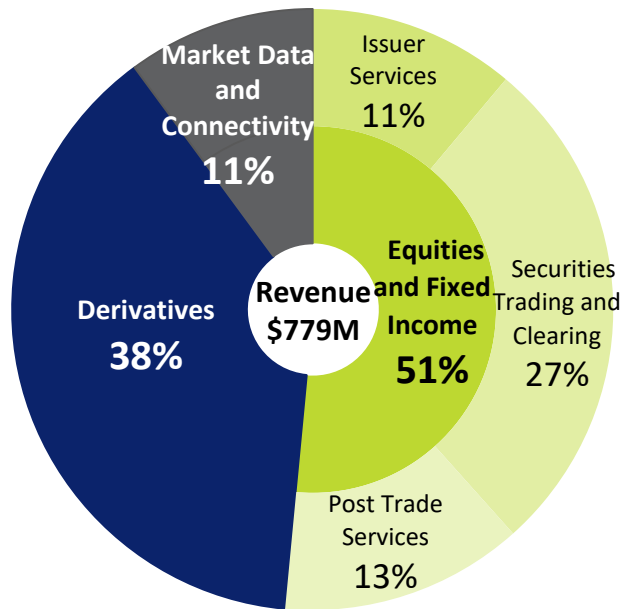
## Key roles of our International offices

- Our key clients include: Sell-side participants, Interdealer brokers, Corporate trade clients, Institutional investors, Asset managers and Proprietary Trading Groups. T+1 volumes increased 28% y-o-y in FY2020.
- Engage existing clients and acquire new clients to improve liquidity (Fixed Income, Currencies, Commodities, Equities and Data, Connectivity and Indices).
- Increase memberships and listing of equity and debt instruments.

# Successfully achieved growth in revenues

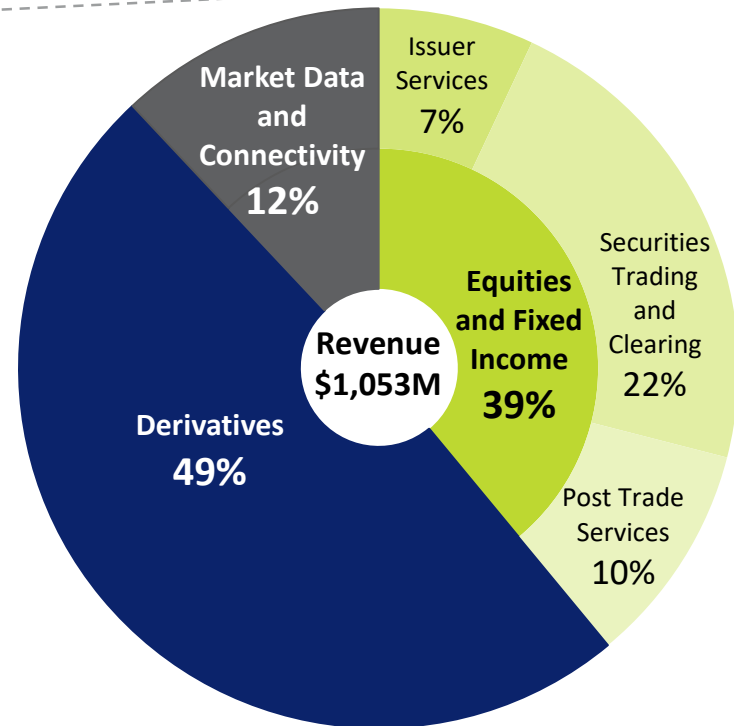
Revenue contribution from Derivatives grew from 38% in FY2015 to 49% in FY2020. Total revenue grew 35% during the same period.

**FY2015 Revenue Breakdown**



**Net Profit: \$349 million**

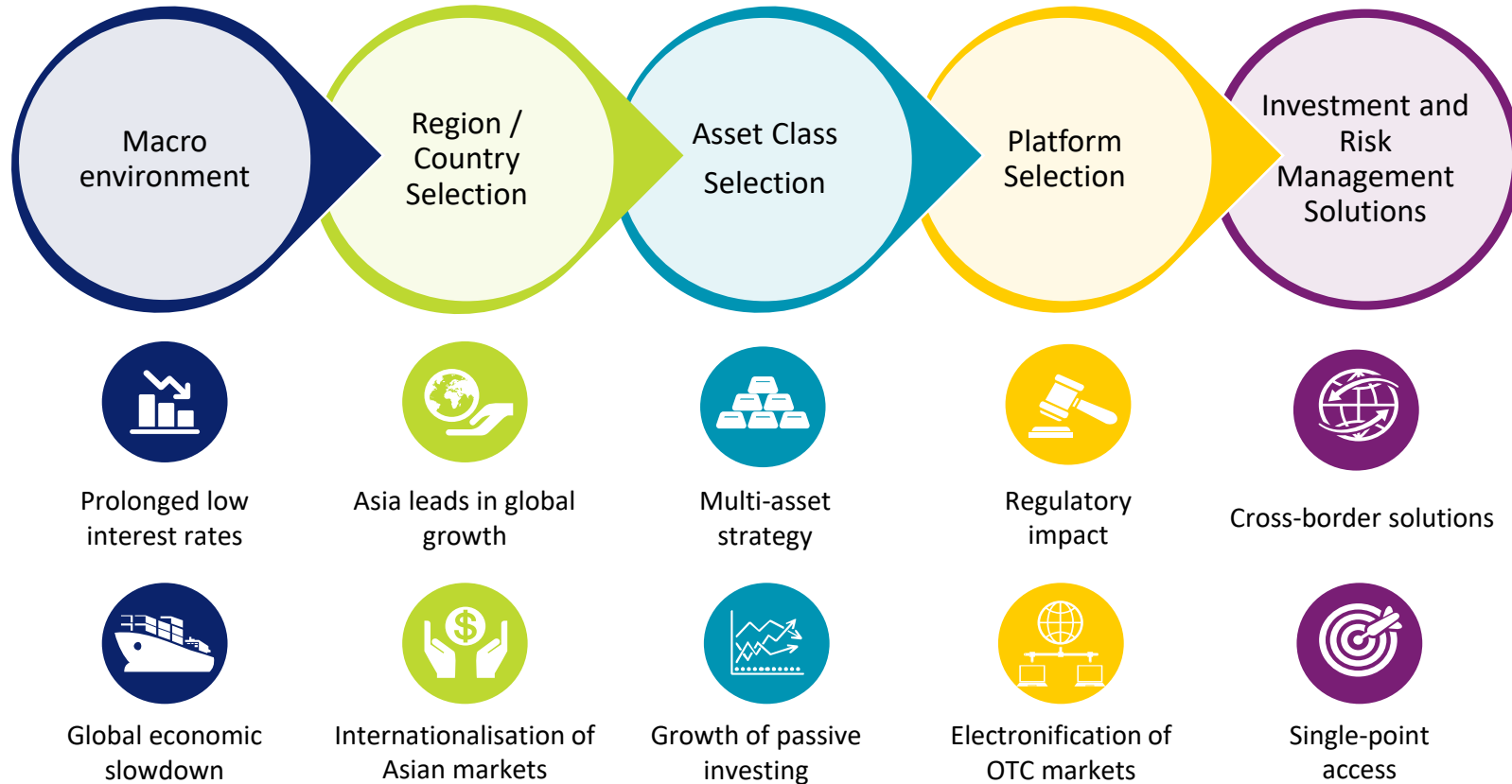
**FY2020 Revenue Breakdown**



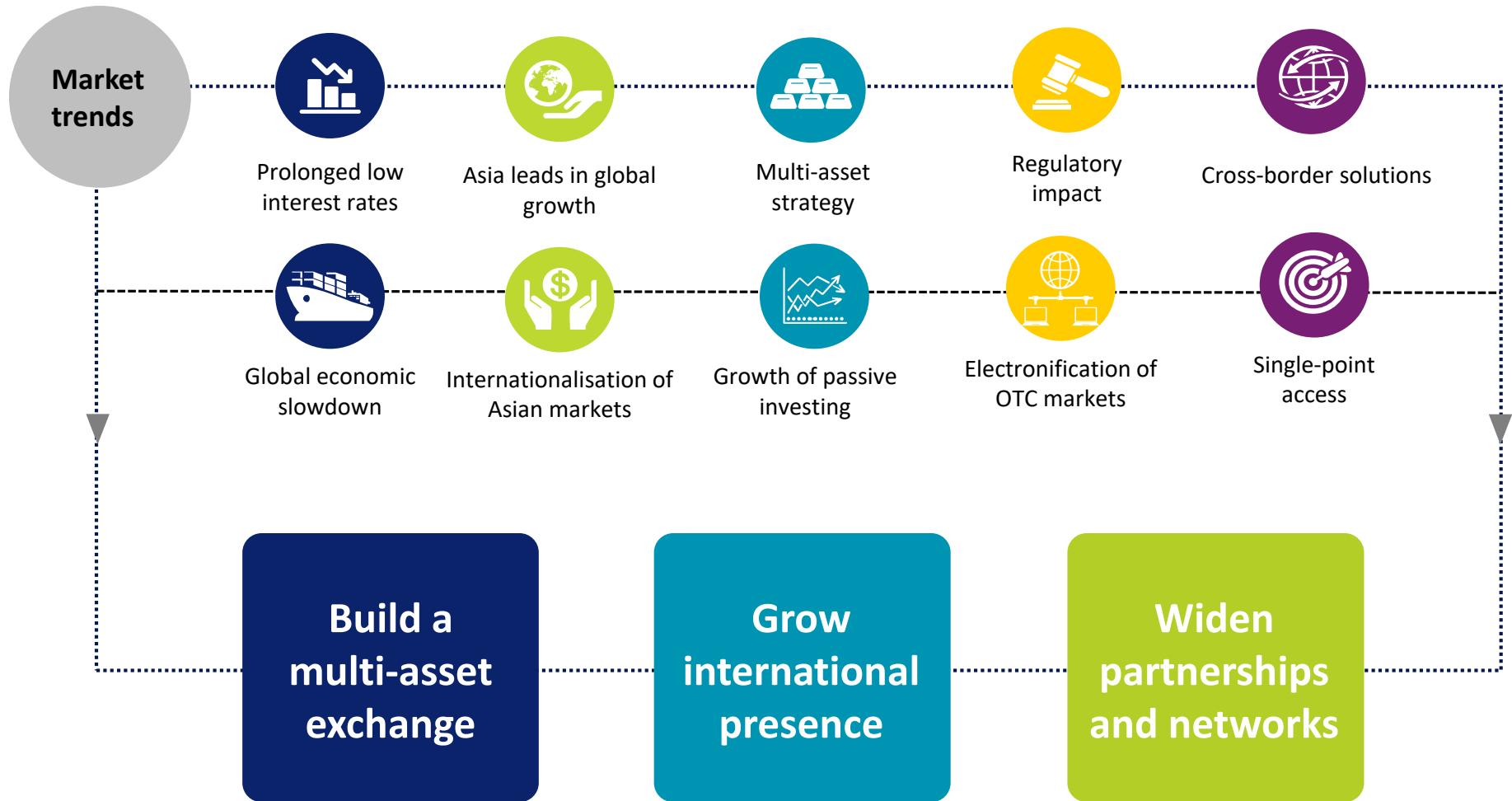
**Net Profit: \$472 million**

Note: Numbers may be subject to rounding  
Source: SGX

# Macro and investor trends shaping markets today



# Executing our strategic priorities





# Four business and client units (from 1 July 2019)

Four business and client units covering the entire exchange value chain, resulting in diversified and resilient revenue streams.

## Fixed Income, Currencies and Commodities (FICC)

- Fixed Income Listing & Trading
- Trading & Clearing of Pan-Asian currency and commodity derivatives



## Equities

- Equity Listings
- Trading & Clearing of Pan-Asian equity index derivatives, cash equities, ETFs, Structured Warrants, REITs, DLCs, etc.
- Delivery, Settlement and Custody of securities



## Data, Connectivity and Indices (DCI)

- FICC and Equities market data
- API and Co-location connectivity
- Development and bespoke calculation of indices



## Global Sales and Origination (GSO)

- Nine international offices and specialist sales teams



# Our strengths as a multi-asset marketplace

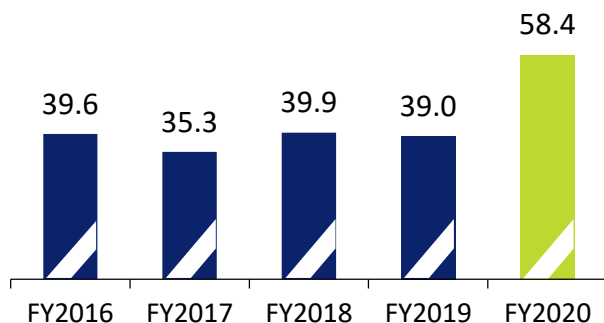


# Robust financials

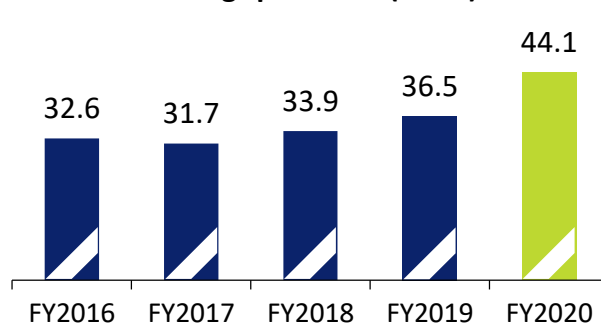
- High EBITDA margin, operating profit margin and ROE of 62%, 54% and 40% respectively
- Dividend of 30.5 cents per share

	FY2016	FY2017	FY2018	FY2019	FY2020
Revenue (\$ million)	818	801	845	910	1,053
EBITDA (\$ million)	469	460	486	524	656 <sup>1</sup>
EBITDA margin	57%	57%	58%	58%	62%
Operating profit (\$ million)	409	402	425	461	566
Operating profit margin	50%	50%	50%	51%	54%
Net profit (\$ million) attributable to SGX	349	340	363	391	472
Return on equity	36%	34%	34%	36%	40%

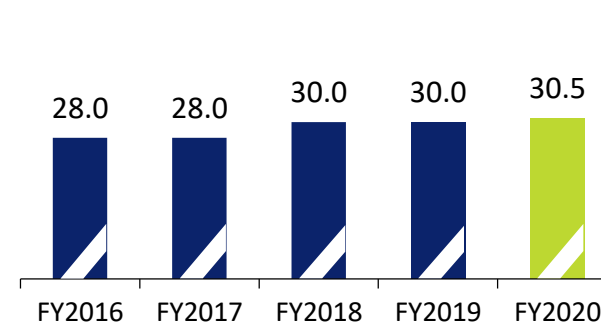
Operating cash flow per share (cents)



Earnings per share (cents)



Dividend per share (cents)



Note: All figures in \$ millions unless otherwise stated and may be subject to rounding

# FY2021 : Advancing to the next phase of our multi-asset strategy with our customers

- Continued underlying growth from developing investment and risk management solutions for our customers
- FICC – Integrated FX platform; Equities – New and expanded suite; DCI – New SB and iEdge index development; GSO – Cross-selling and growth through partnerships
- Investment and risk management activities likely to continue. Driven by prolonged low interest rates, escalating geopolitical tensions between US and China, and economies' differing pace of recovery from COVID-19, whilst market activity could ease from the high of 2H FY2020.

## FICC

- Platform for OTC and on-exchange FX through BidFX
- Build Asian NDF volume and G10 Spot and Swaps
- Financialisation of our commodities suite

## Equities

- Expand suite of Equity Derivatives
- Develop ESG-related investment opportunities
- More single stock futures and structured products

## DCI


- New indices in sustainable capital and finance
- Expand range of iEdge and Scientific Beta thematic indices

## GSO

- New customer acquisition and cross-selling
- Grow distribution through partnerships
- Targeted sales strategy

# Fixed Income, Currencies and Commodities (FICC)

# A leading Fixed Income listing venue

Fixed Income	Size of Market 	Singapore 	SGX 
	<ul style="list-style-type: none"> <li>Asia (ex-Japan) bond market of US\$14 trillion</li> <li>Shift towards electronic trading</li> <li>Regulatory trends favour shift to on-exchange clearing</li> </ul>	<ul style="list-style-type: none"> <li>Strong distribution network to global investor base with US\$3.4 trillion of AUM in Singapore</li> </ul>	<ul style="list-style-type: none"> <li>&gt;US\$2.2T amount issued, with more than 6,600 listed bonds from over 66 countries in 26 currencies</li> <li>Launched SGX Bond Pro, an electronic platform for Bond Trading</li> </ul>

## Key SGX Highlights

**>6,600 bonds**

listed by 1,600 issuers from over 66 countries in 26 currencies

**~40%**

market share for listed G3 APAC bonds  
**Leading Bond listing exchange in Asia Pacific**

**~200**

Number of customer sign-ups  
**SGX Bond Pro gaining traction**

**TRUMID**

**Expanding network**

# Largest and fastest growing currency futures exchange in Asia

	Size of Market 	Singapore 	SGX 
<b>Currencies</b>	<ul style="list-style-type: none"> <li>▪ Largest financial market globally with US\$6.6 trillion traded OTC daily</li> <li>▪ Asian NDFs is a US\$153 billion market that has potential to be futurised</li> <li>▪ Regulatory trends favour shift to on-exchange clearing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Largest FX center in Asia Pacific, third largest globally</li> <li>▪ US\$640 billion traded OTC daily</li> <li>▪ Leading global trading venue for key Asian currencies</li> </ul>	<ul style="list-style-type: none"> <li>▪ Diverse Asian currency suite of 23 currency futures and options contracts</li> <li>▪ &gt;80% market share in USD/CNH and &gt; 60% market share in INR/USD</li> <li>▪ Notional on-exchange FX ADV of US\$5.9B in FY20</li> <li>▪ Innovative FlexC FX futures feature</li> </ul>
	<b>Key SGX Highlights</b>		

**23**

Futures

**2**

Options

Diverse Asian FX suite

**133%**

Total Volume – CAGR  
Nov 13 – Nov 20

**US\$10.36Bn**

Open Interest value  
(Nov 2020)

**~US\$1.3T**

Notional value traded in 2019  
up 44% y-o-y

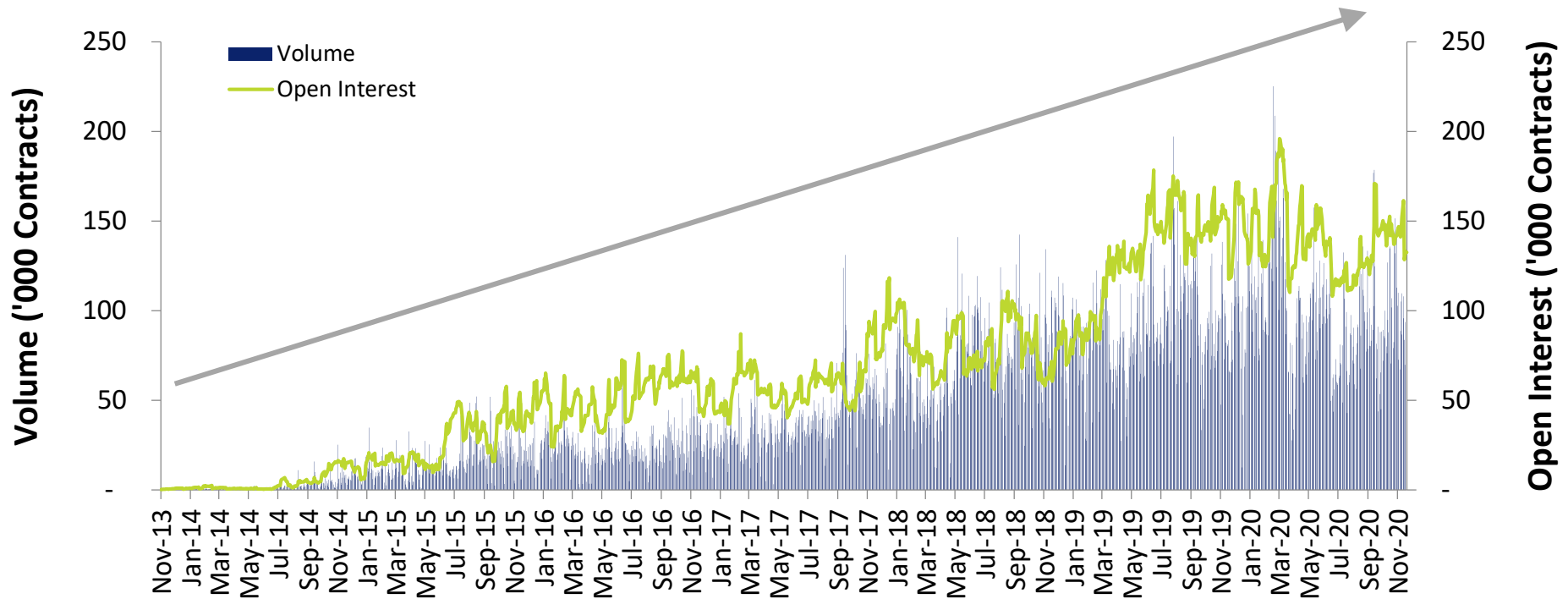


Expanding Network

# Currency Futures as a growth driver

133% volume CAGR since November 2013

## SGX Currency Futures – Total Daily Volume & Open Interest



Asia's Best FX Exchange & Clearing House – by FX Week (2018 and 2019)

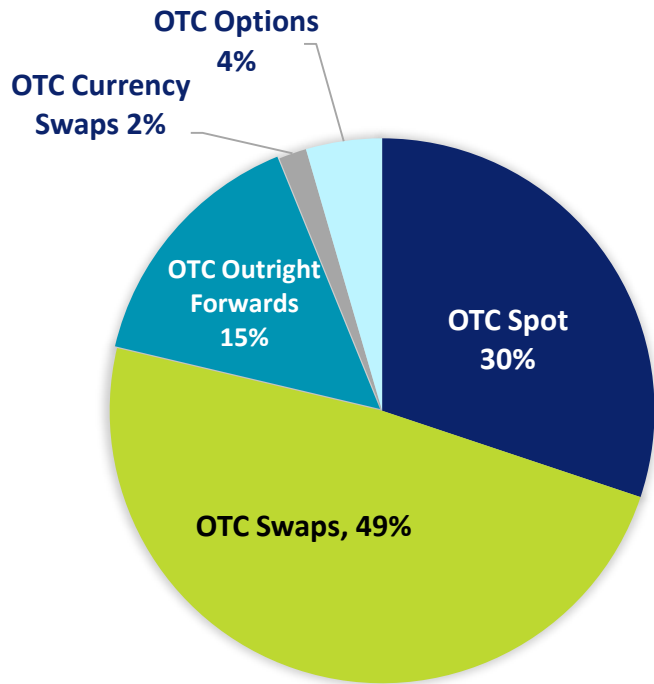
Note: Data as at 30 November 2020



# BidFX provides SGX opportunity to target a larger OTC FX market

OTC FX Trading in 2019: US\$6.6 trillion traded daily  
 Exchange-traded FX derivatives 2019: US\$0.16 trillion traded

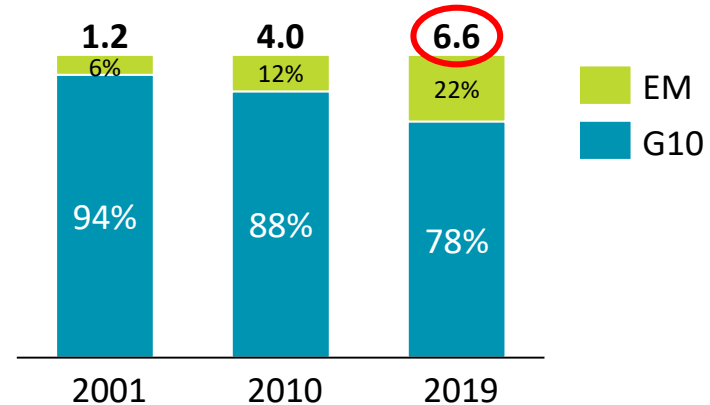
## Global OTC FX Trading in 2019 – by instrument type



## Synergistic opportunities from BidFX’s strengths:

- Asian NDF
- G10 Spot & Swaps
- International footprint

## OTC FX: Increasing growth of EM currencies<sup>1</sup> US\$ Trillion ADV, 2001-2019



Source: BIS Triennial Central Bank Survey 2019 and SGX estimates

1. EM currencies are defined by BIS as EME currencies, which include non-EM currencies such as SGD and HKD even though these are not classified as “emerging” economies. Adjusted for local and cross-border inter-dealer double counting (i.e. net-net basis). Excludes exchange-traded derivatives.

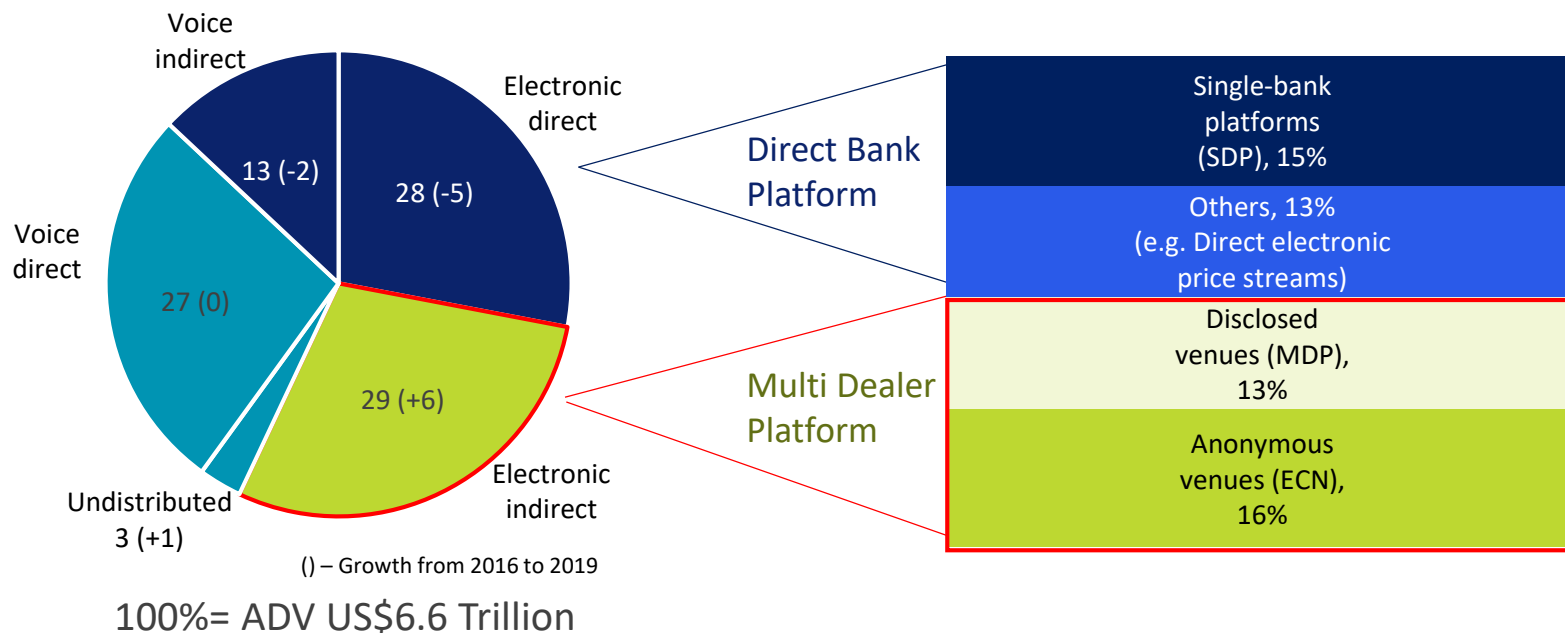
# Potential to capture greater electrification of FX market

BidFX is positioned as a buy-side Multi-Dealer Platform (MDP), which has gained 6% share since 2016

Breakdown of FX volumes by Execution Methods  
Percentage shares in total turnover

Broad voice and electronic execution methods (%)

Breakdown of electronic execution methods (%)



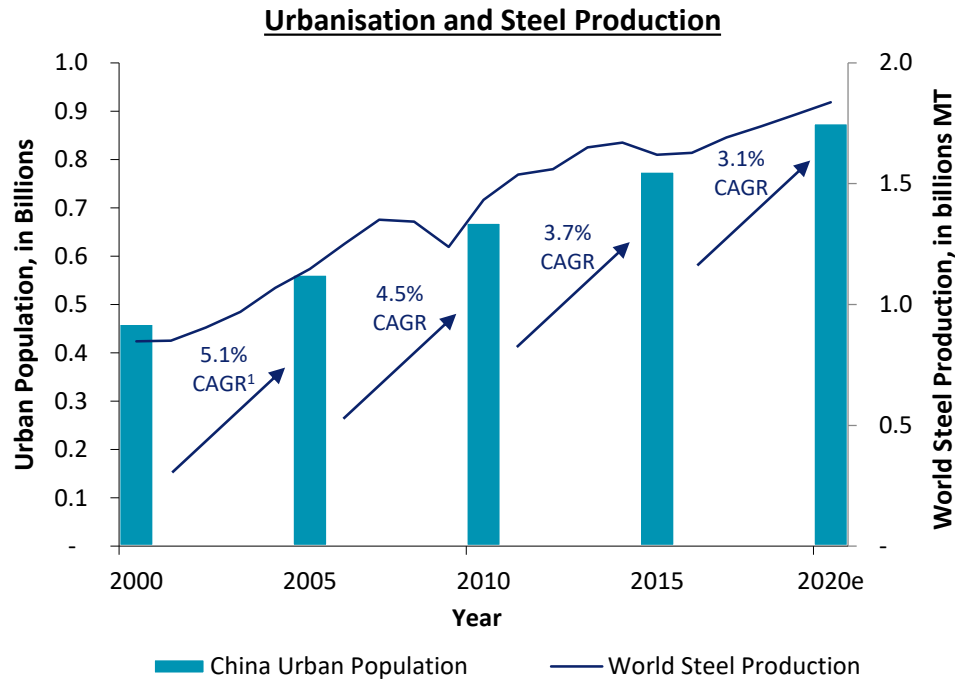
**SDP:** Single Dealer Platform, individual bank proprietary trading which only allows clients to trade with the bank

**MDP:** Multi-Dealer Platform, electronic venue (usually 3<sup>rd</sup> party) for clients to access liquidity from many banks

**ECN:** “Electronic Communication Network” that automatically matches buy and sell orders on an anonymous basis and provides direct access to market participants. It resembles the ‘exchange’ trading model

# Extensive Suite Of Commodities Products

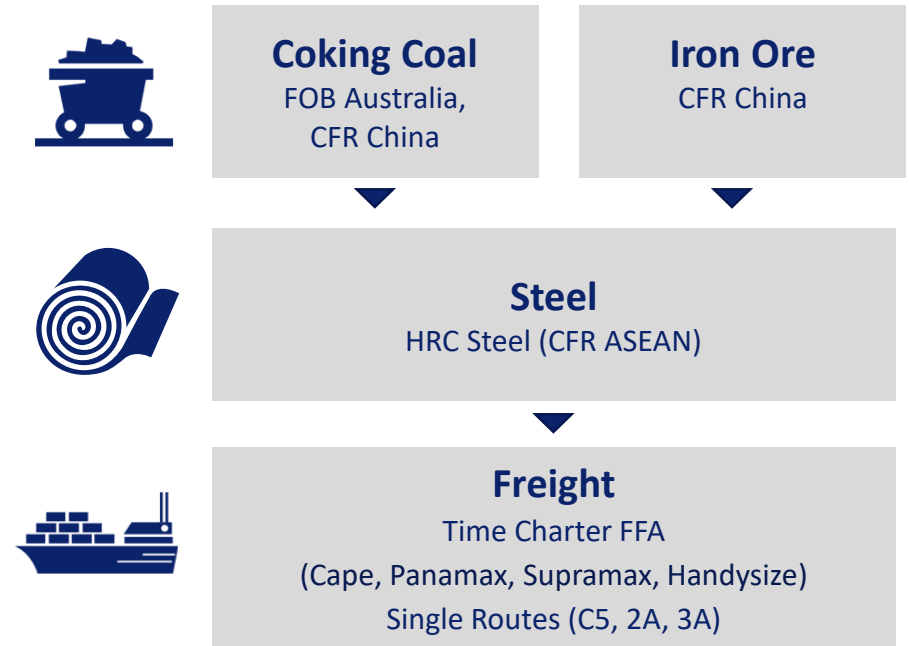
- Complements Singapore's commodities hub status
- Demand for industrial commodities set to continue amid sustained urbanisation



Source :  
 UN Population Division, <https://population.un.org/wup/DataQuery/>  
 Steel production statistics: World Steel Association

<sup>1</sup> CAGR in chart relates to growth of China's Urban Population

## Price-Discovery Centre For The Steel Value Chain



**Baltic Exchange** Maritime Indices

# The leading offshore Iron Ore risk management hub

	Size of Market 	Singapore 	SGX 
<b>Iron Ore</b>	<ul style="list-style-type: none"> <li>▪ Largest in the metal market by tonnage</li> <li>▪ Notional value of &gt;US\$115B traded annually in the physical market</li> <li>▪ Asia's first truly global commodity, with China a major consumer</li> <li>▪ Increasing financialisation of Iron Ore</li> </ul>	<ul style="list-style-type: none"> <li>▪ Leading merchant hub for commodities houses with ~140 metals and mineral companies</li> <li>▪ Include top iron producers e.g. Vale, Rio Tinto, BHP Billiton</li> </ul>	<ul style="list-style-type: none"> <li>▪ Global pricing and risk management centre</li> <li>▪ Cleared 1.5 billion MT of iron ore in 2019</li> <li>▪ Offers a complete iron ore suite: 58% Fe, 62% Fe, 65% Fe</li> <li>▪ Steel value chain incorporating coking coal and freight</li> </ul>

## Key SGX Highlights

**1.5 billion MT**

cleared in CY2019

**> 95%**

market share of international iron ore volumes cleared

**Fe 65%**

New high-grade Fe futures contract

**1.5x**

of paper to physical ratio

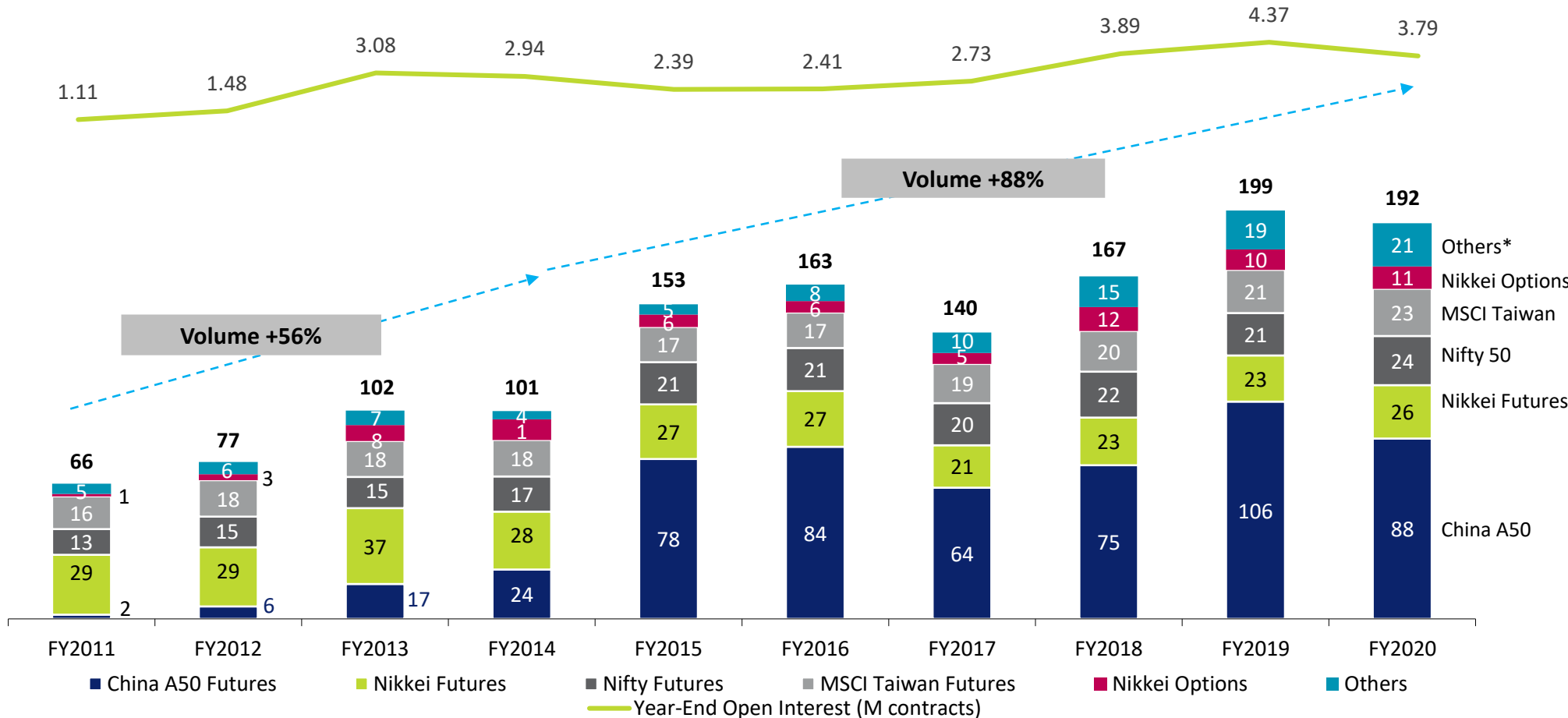
**Potential to grow**

# Equities (Derivatives and Cash)

# Rapidly growing offshore market for Asian Equity Derivatives

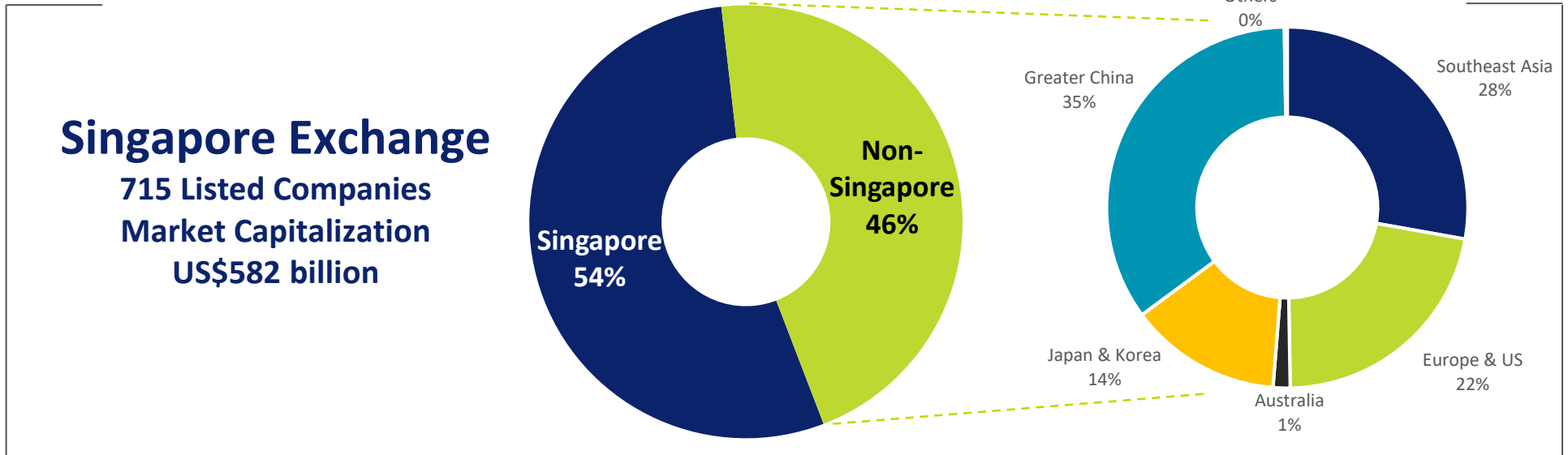
Multi-asset exchange, offering a broad range of Asian access and risk management solutions

Volumes and open interest, in millions

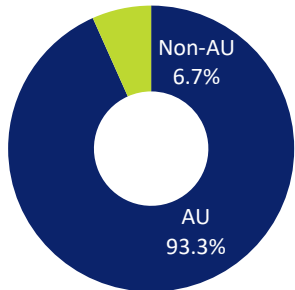


# SGX is the Most International Exchange

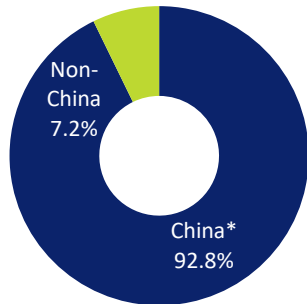
More than 40% of total market cap of companies listed on SGX are overseas companies



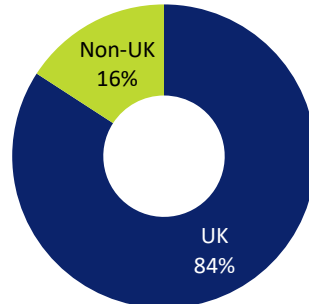
**Australia Securities Exchange**



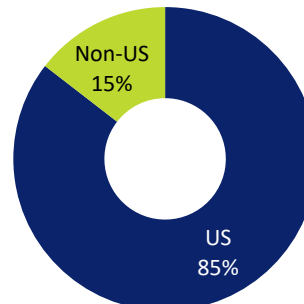
**Hong Kong Stock Exchange**



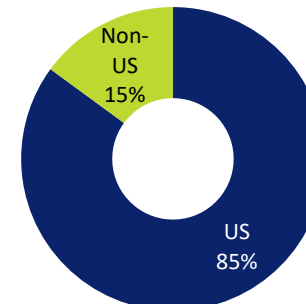
**London Stock Exchange**



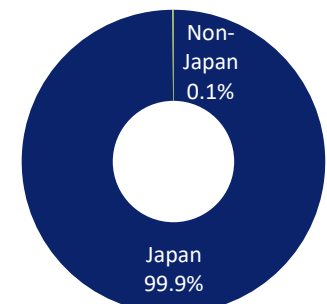
**NASDAQ**



**New York Stock Exchange**



**Tokyo Stock Exchange**



\*Note: Greater China includes Hong Kong, Taiwan and Mainland China companies

# Top Sectors on SGX

## Consumer



PE: 16x

- Includes food & beverage, retail and others
- 138 companies with market cap of US\$49 billion

## Technology



PE: 20x^

- Includes technology hardware & equipment, digital, semiconductor and telecommunications services companies. Other businesses include media, clean tech and engineering.
- 82 companies with market cap of US\$50 billion

## Healthcare



PE: 22x\*

- Full range of companies from pharmaceuticals, healthcare services to medical devices technology
- 35 companies with market cap of US\$55 billion

## Maritime, Offshore Services & Energy



PE: 15x

- Asia's largest cluster of listed companies
- 62 companies and 2 business trusts with market cap of US\$15 billion

## Commodities



PE: 15x

- Includes Agri-commodities, Mineral & Oil & Gas Companies
- 34 companies with market cap of US\$28 billion

## Real Estate



PB: 1.0x

- Asia's broadest range of real estate companies and property trusts covering global real estate assets
- 109 real estate companies and property trusts with market cap of US\$119 billion

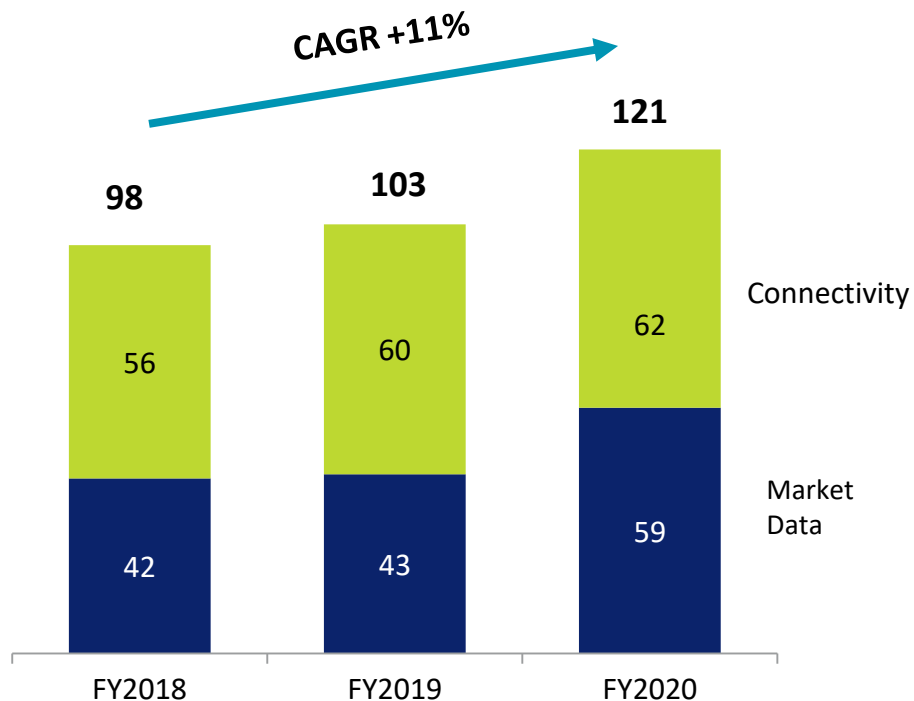
Source: Bloomberg & Singapore Exchange (June 2020)



# Data, Connectivity and Indices (DCI)

# Overview

## Data, Connectivity and Indices



- Market infrastructure business driven by increased use of technology in trading
- Supports Securities and Derivatives Trading:

**Data:** Price data, Company Announcements, Financial Indices

**Connectivity:** Trading system connections, Network linkages and Data center co-location

Note: Numbers may be subject to rounding.

# Index Business

- Global Exchange Traded Products (index-based) have AUM of > US\$4tn
- Index funds (unlisted) has grown >230% to > US\$ 6tn since 2007
- Acquisition of Scientific Beta (SB) in February 2020



## Index Calculation Service

- Calculating for leading investment banks and asset managers
- Flexible index engine for calculating and disseminating wide variety of indices
- Strong governance framework to meet regulatory requirements
- Established capabilities in Europe

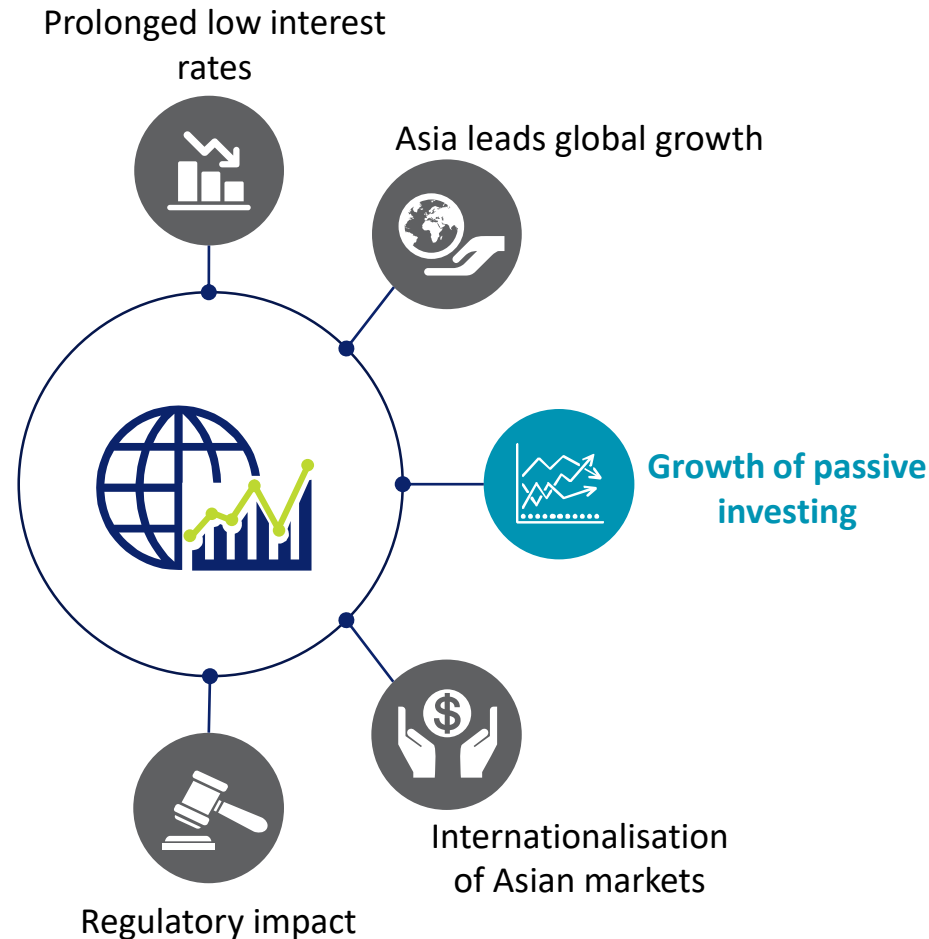


## Proprietary Indices

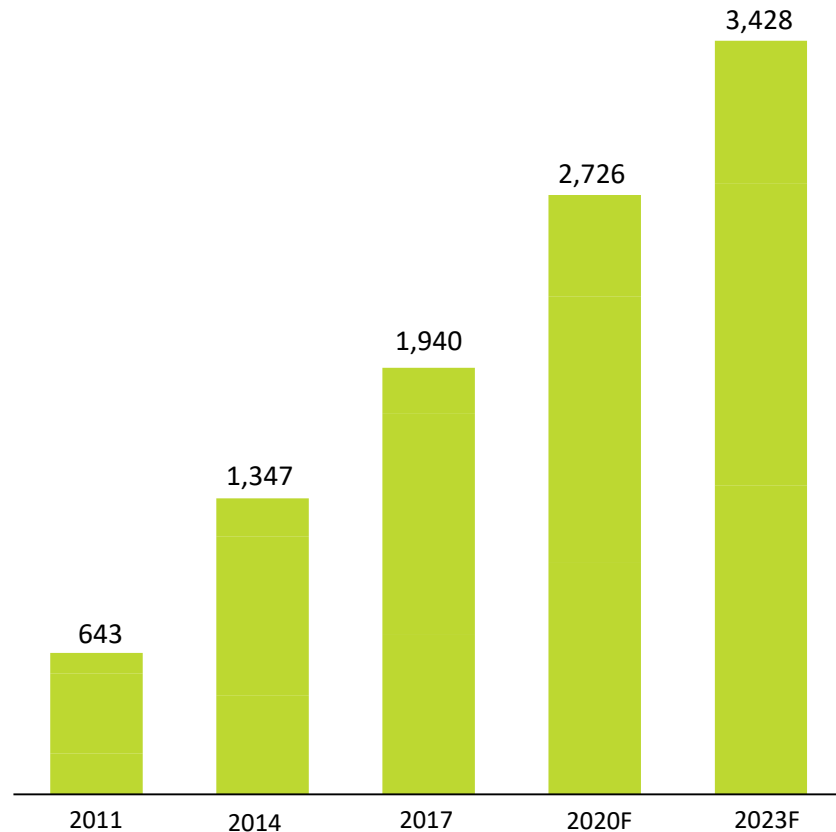
- **SGX iEdge Domestic Indices**
  - SGX Thematic indices e.g. S-REIT 20
  - SGX Sustainability index
- **SGX iEdge Regional Indices**
  - SGX Developed Asia Quality Dividend Index
  - SGX APAC Dividend REIT
- **Smart Beta Indices**
  - Developed by Scientific Beta

# Index investing and the 'Smart Beta' market

Factor investing has seen significant growth in recent years, with assets using smart beta and factor-based strategies forecast to reach US\$2.7 trillion by 2020<sup>1</sup>, and there is further room for growth.



Global Factor & Smart Beta AUM (USD billion)<sup>1</sup>



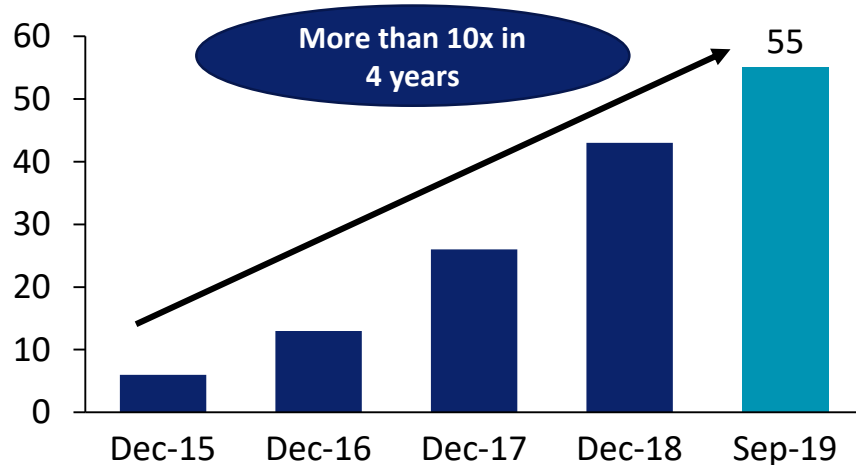
# Scientific Beta broadens SGX's index offering through the fast-growing 'Smart Beta' index space



- Established in 2012 by EDHEC-Risk Institute Asia
- Award winning 'Smart Beta' index firm which develops, produces and promotes multi- and single-factor indices
- HQ in Singapore; offices in France, UK and US
- Asset owner-focused client base

- ✓ High priority growth area for SGX
- ✓ Well-positioned in a high-growth market
- ✓ Financially attractive
- ✓ Brings unique capabilities to our Index business
- ✓ Exciting product innovation opportunities
- ✓ Strong potential linkages with SGX's product platform

**Scientific Beta Assets Under Replication (US\$ bn)**



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# Strategically elevates SGX's Index business

- 1 Broad index offering, with (a) strong research-based index construction capabilities, (b) index calculation services, and (c) expansion into smart ESG and green investing



- 2 Develop wider suite of products, leveraging SGX's product capabilities and Scientific Beta's academic rigor

- 3 Service wider range of clients, across geographies and client type (asset owners, asset managers and investment banks)

# Other Information

# Delivering growth with bolt-on investments

## Supporting SGX's multi-asset strategy

### Fixed Income, Currencies and Commodities

#### Fixed Income



One of the fastest growing **electronic fixed income trading platform** in the US

#### Currencies



Rapidly growing **FX electronic trading solution** which serves institutional investors with single point of access to global OTC FX network

#### Commodities



Operates as a **price discovery platform for container, sea and airfreight** with potential to be a global spot trade execution venue and index provider (FBX)



Provides an **FX post trade platform** as a middle and back office utility based on Distributed Ledger Technology (DLT)



**Physical commodity electronic marketplace** to produce Asia-centric commodity indices and derivatives in partnership with the Zall Group and GeTS

### Equities

#### Equities— Cash



Private Markets – **Pre-IPO funding raising** help create a pipeline for public market capital raising on SGX



Private Markets - **Regulated tokenized fundraising** and trading venue for asset-backed security tokens

### Data, Connectivity & Indices

#### Indices

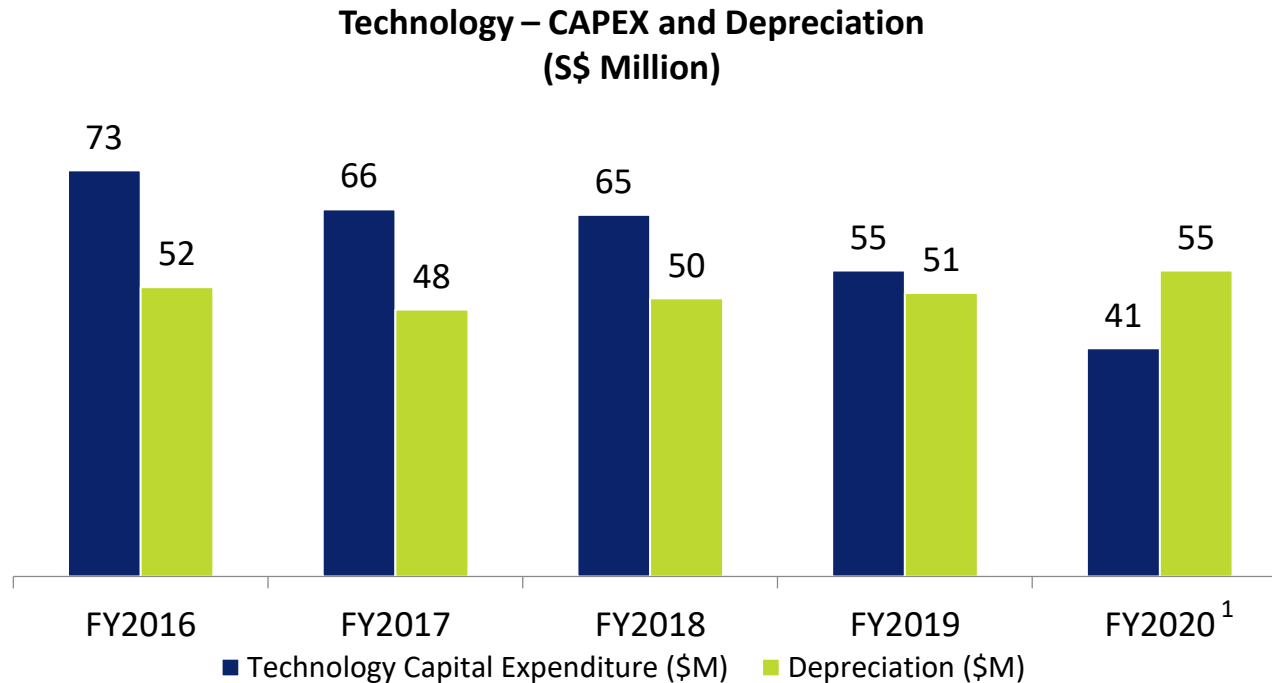


A 'Smart Beta' index firm, specialising in multi- and single-factor index investment strategies. Singapore-incorporated, with offices in France, UK and US. Offers (a) strong research-based index construction capabilities, (b) index calculation services, and (c) expansion into smart ESG and green investing



# Technology investments have enabled higher capacity for growth

- Past investments advanced SGX's technology capabilities and enables higher capacity for growth
- FY2020 CAPEX of \$41M below guidance of \$45M to \$50M. Enhanced key technology infrastructure, digitalised retail investor services, and upgraded Titan OTC commodities trade reporting system.
- FY2021 CAPEX Guidance: \$55M to \$60M



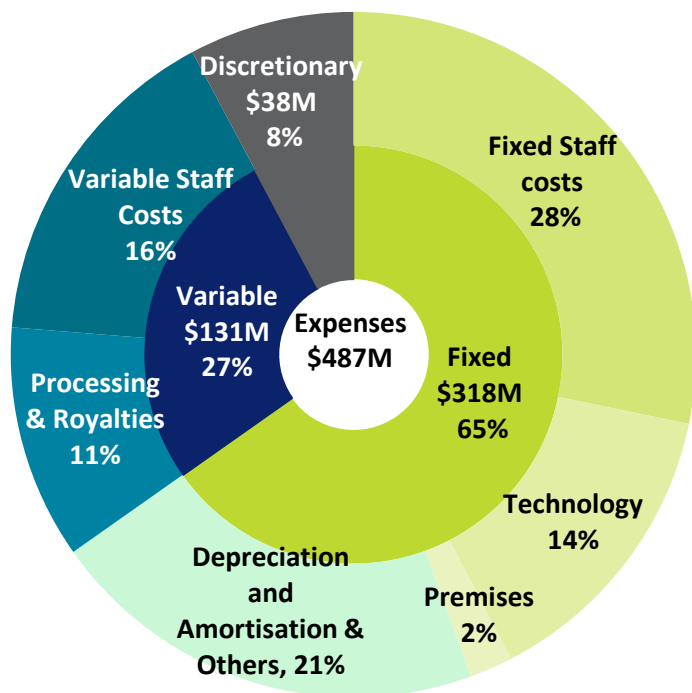
Note: All figures in \$ millions unless otherwise stated and may be subject to rounding

<sup>1</sup>FY2020 Technology Depreciation excludes the impact of adoption of SFRS (I)16 Leases of \$7.7M.

# Disciplined in our expenditure

- Investments in building capabilities to support multi-asset strategy
- FY2020 expense of \$487M, up 8% from a year ago, CAGR of 4% from FY2016-FY2020
- FY2021 Operating Expense Guidance: \$535M to \$545M

**FY2020 Expense Breakdown**



- **Fixed costs – 65%**
- **Variable costs – 27%**
  - Variable staff cost increase in line with profitability
  - Processing & Royalties expenses are volume-related
  - Royalties are recovered as revenues under licence fees
- **Discretionary costs – 8%**

Note: Numbers may be subject to rounding.

# Appendix

- Sustainability
- Cross margining example
- Shareholder profile
- Dividend history
- FY2020 Performance

# Sustainability at SGX

Ensuring long-term value for our stakeholders and creating a positive, lasting impact on society

Sustainability factors that are important to SGX:

1. **Economic Performance** : Our financial performance, economic value creation, distribution, and retention for shareholders
2. **Socioeconomic Impacts** : Our external impacts through our role as a market operator and regulator
3. **Governance** : Our governance structure, ethics and integrity, anti-corruption and compliance policies
4. **People** : Our talent management and responsible employment practices
5. **Environment** : Our role in mitigating climate change

## Our Focus



### Equities

Develop ESG-related risk management and trading solutions; publish ESG ratings for SGX-listed companies



### Commodities

Develop more ESG-related derivatives to support the production of essential materials such as higher grade iron ore, low sulphur FFA and sustainable rubber



### Regulation

Partner ESG experts and consultants to provide resources and training to help listed companies produce sustainability reports that are in line with globally-recognised frameworks. SGX has also been leading in the advocacy for Women on Boards in Singapore since 2012.



### Fixed Income

Aim to be the preeminent Asian platform for green, social and sustainability fixed income securities.



### Indices

Develop more sustainability benchmarks, ratings and products to facilitate shift towards sustainable investing. These include custom ESG thematic indices such as low carbon and climate change risk.



### Corporate

Identify and assess ESG risks and opportunities through robust enterprise risk management system. SGX is a component of FTSE4Good Index, Bloomberg ESG Data Index and MSCI World ESG Leaders Index.



Awarded Asia's Best Sustainability Report (within Annual Report) in 2020

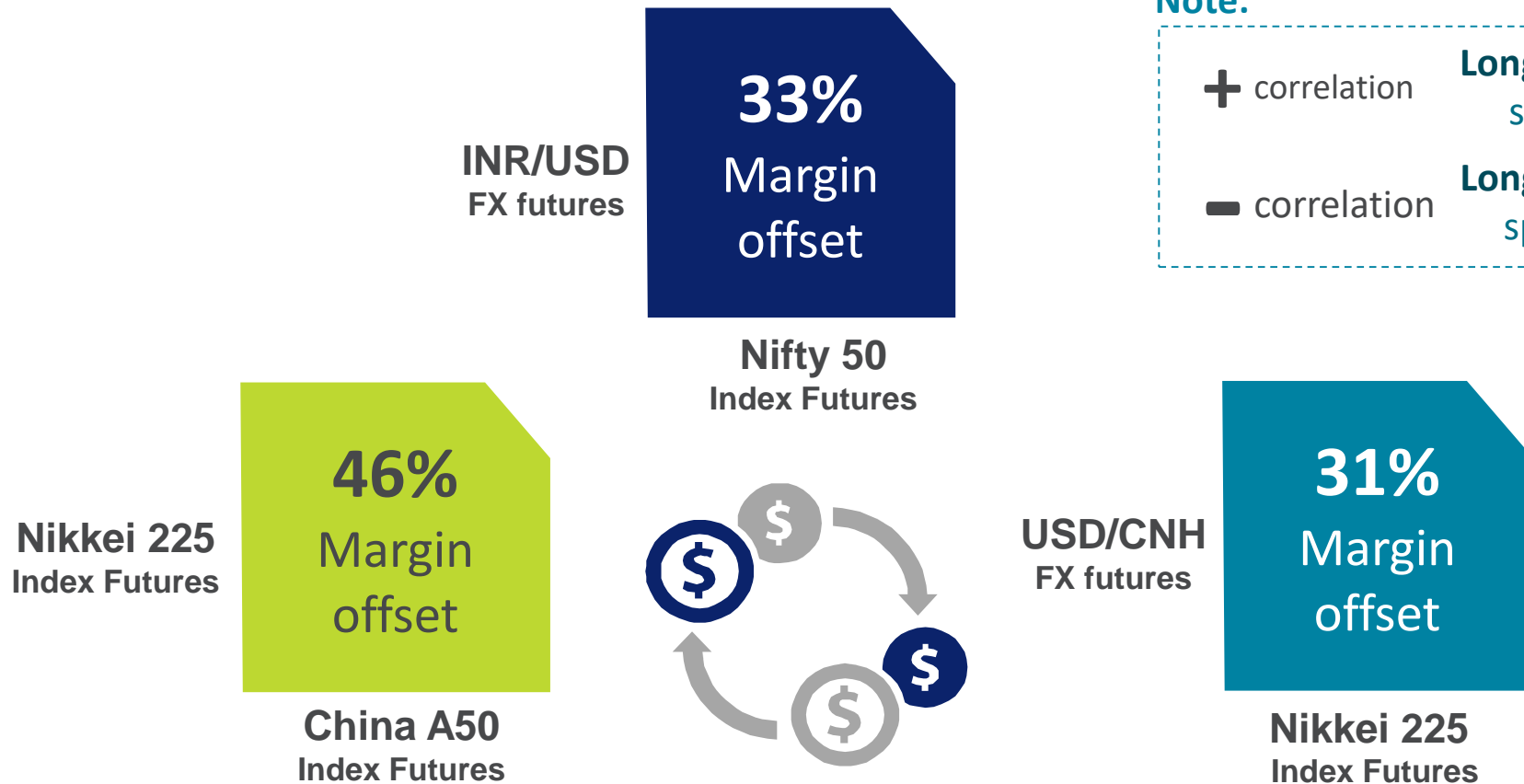
Ranked within the top 5 among listed companies in the NUS Governance and Transparency Index\* in the last 5 years.

# Cross margining efficiencies

Correlated products, margin netting efficiencies

Note:

+ correlation Long – Short spread  
- correlation Long – Long spread



Note: Based on Margin Schedule as of 3 February 2020, full schedule available on SGX website

# Cross margining example

More exposure with the same amount of margins



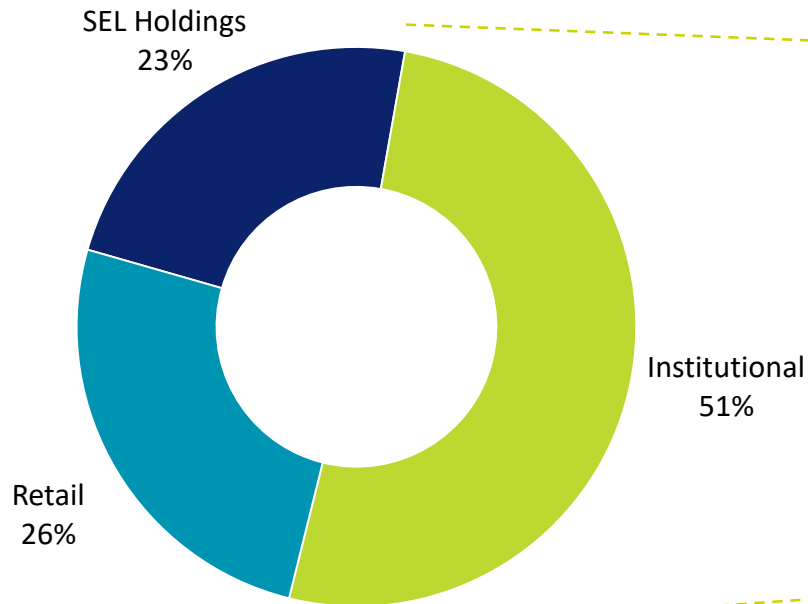
Note: Based on exchange rate as of 3 February 2020

Based on Margin Schedule as of 3 February 2020, full schedule available on SGX website

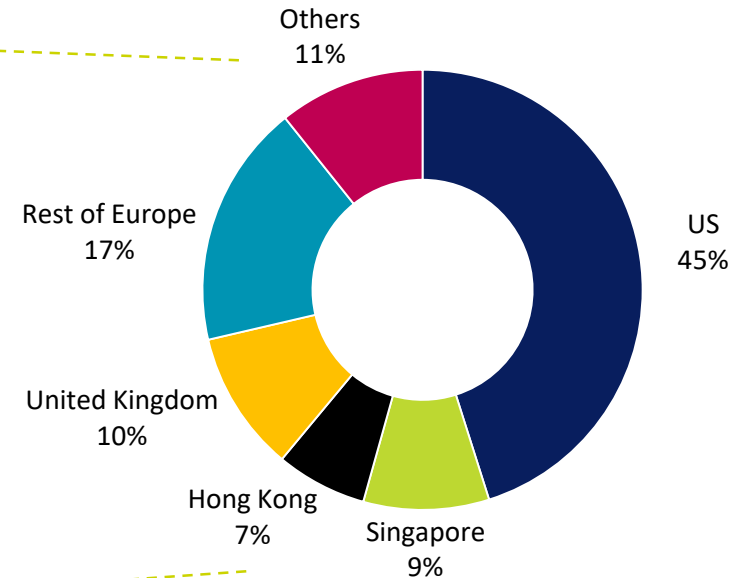
# SGX shareholders' profile

Broad shareholding base with domestic retail shareholders, as well as domestic and international institutions

**SGX Shareholder Composition<sup>1</sup>**



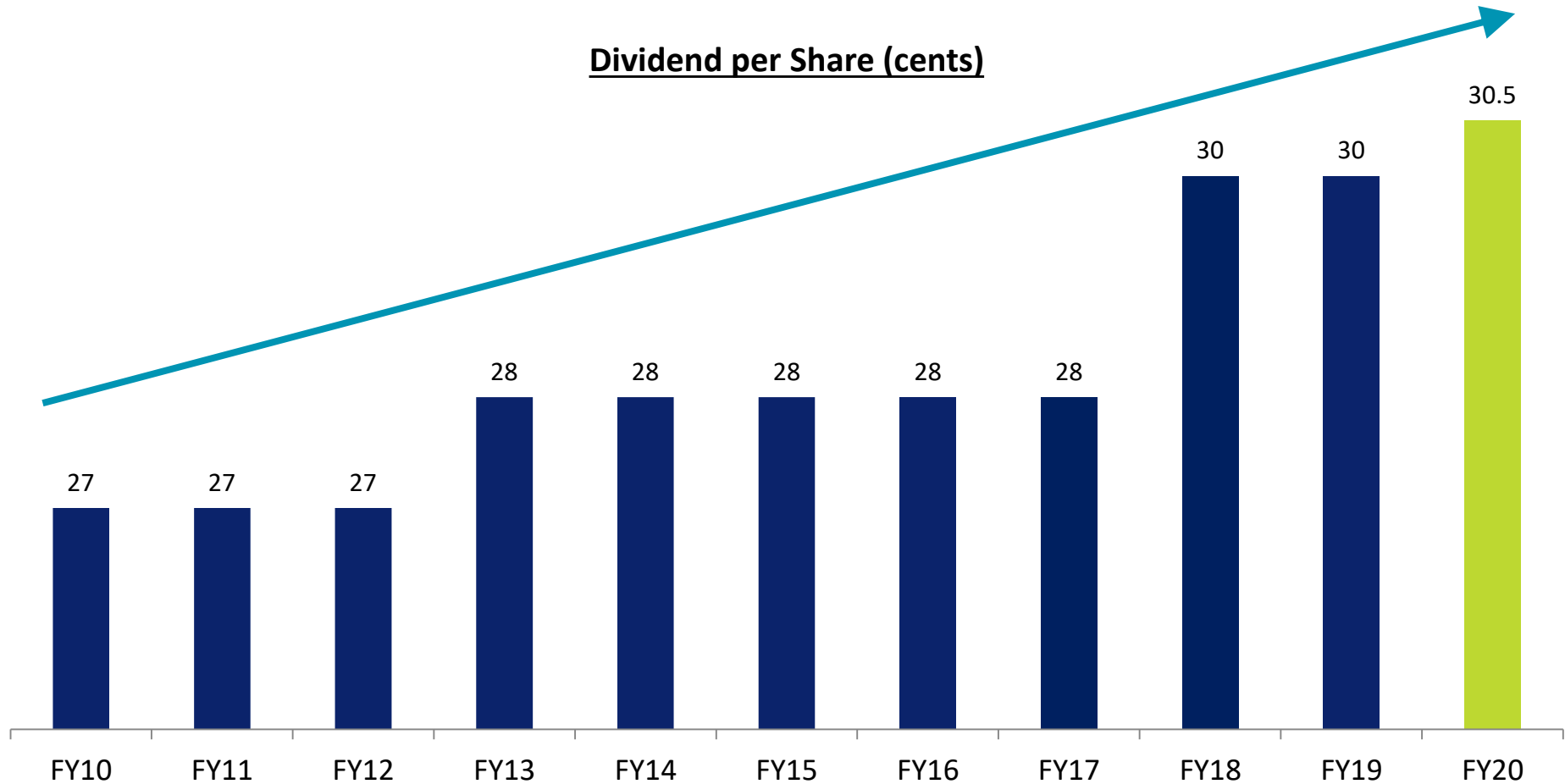
**Institutional Shareholding by Geography**



Note: Numbers may be subject to rounding.  
<sup>1</sup>As at 30 June 2020

# Dividend history

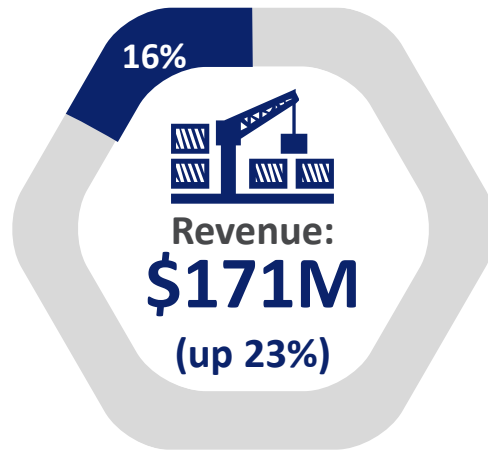
Committed to returning value to our shareholders



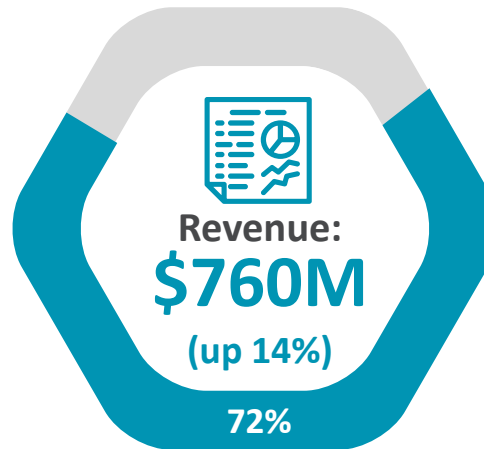


# FY2020 Performance

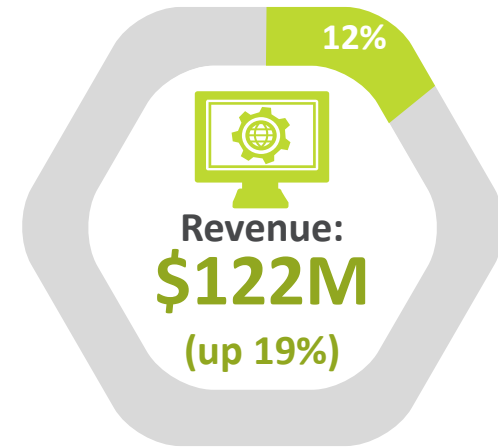
## Fixed Income, Currencies & Commodities (FICC)



## Equities



## Data, Connectivity & Indices (DCI)



- Total revenue of >\$1.0 billion, highest since listing
- Achieved double-digit growth in all business segments under a new organisational structure
- Leveraged on our global network and partnerships to engage and acquire new customers

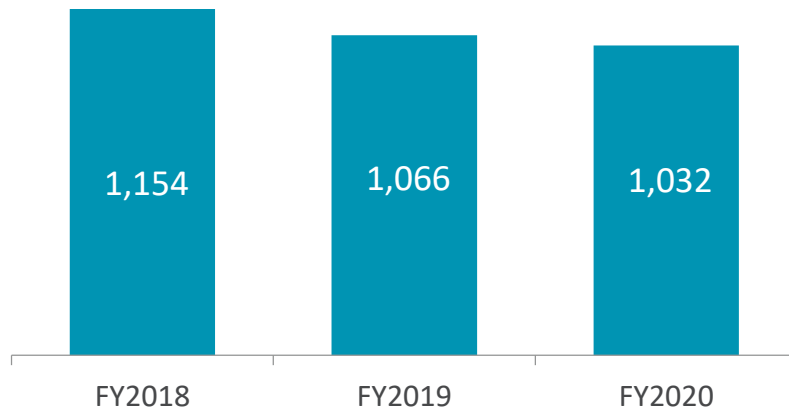
Note: All figures may be subject to rounding

# FICC – Fixed Income

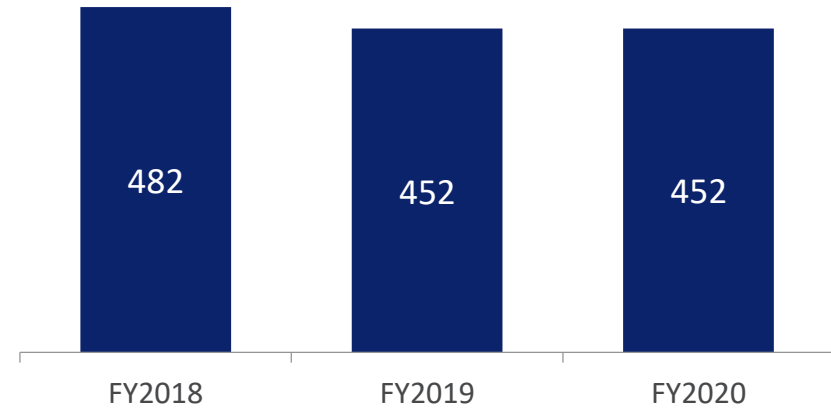
FICC  
\$171M ↑ 23% y-o-y

- Number of new bond listings at 1,032, down 3%
- Total bond amounts issued at \$452B, comparable
- Attracted more bond issuers from North America, Latam, and India

No. of New Bond listings



Total Bonds Amount Issued (\$B)



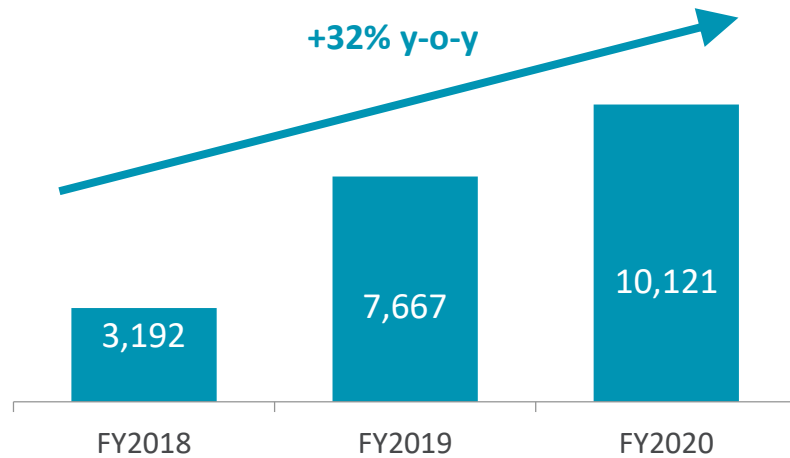
Note: All figures in \$ millions unless otherwise stated and may be subject to rounding

# FICC – Currencies

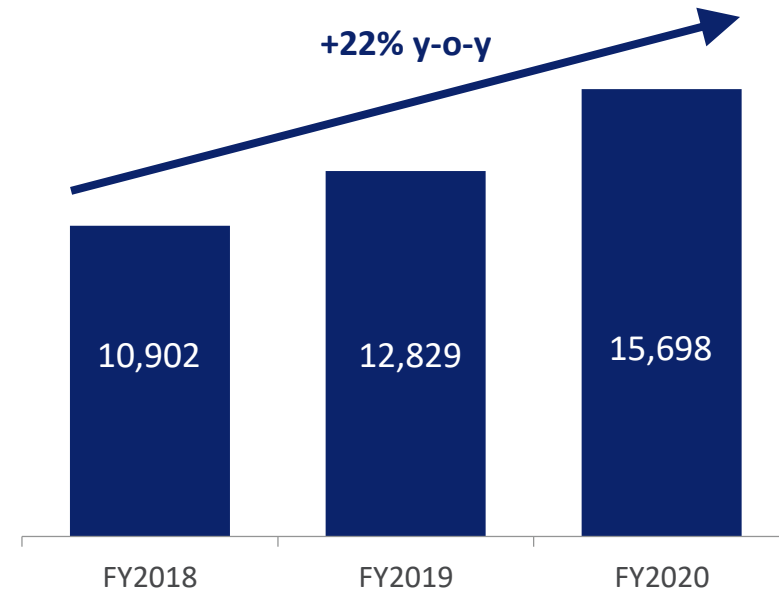
**FICC**  
**\$171M ↑ 23% y-o-y**

- Currencies volume up 27% to 26.4M contracts
- Notional value traded increased 28% to US\$1.46T
- Overnight T+1 volume increased 53%, contributing to ~28% of total currency volumes

USD/ CNH Volume ('000 contracts)



INR/ USD Volume ('000 contracts)



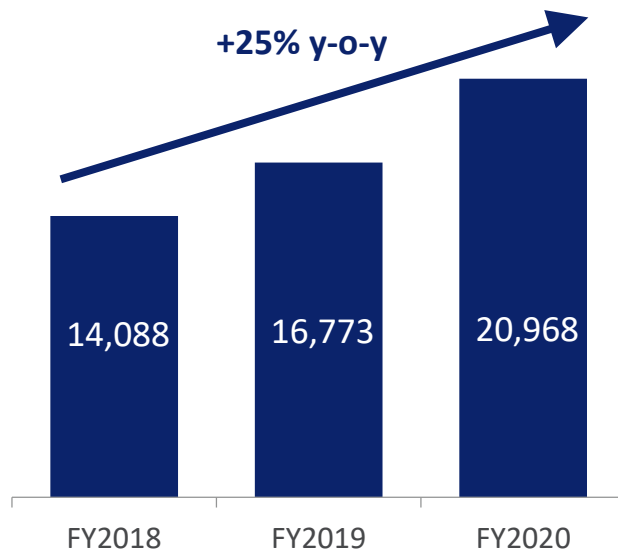
Note: All figures in \$ millions unless otherwise stated and may be subject to rounding

# FICC – Commodities

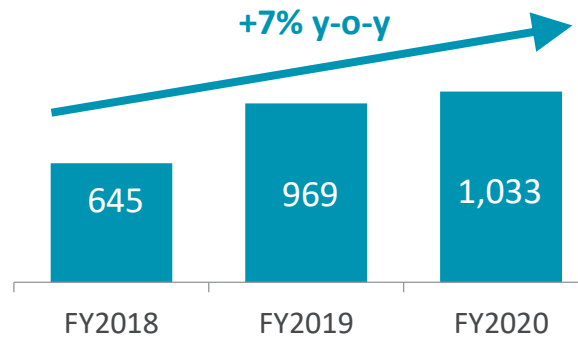
**FICC**  
**\$171M ↑ 23% y-o-y**

- Iron ore volumes up 25% y-o-y to 21.0M contracts
- Established global benchmark with over 98% market share
- Financialisation: >35% of commodities volumes from financial market participants
- Screen trading grew 12% to contribute 19% of total Iron Ore volumes

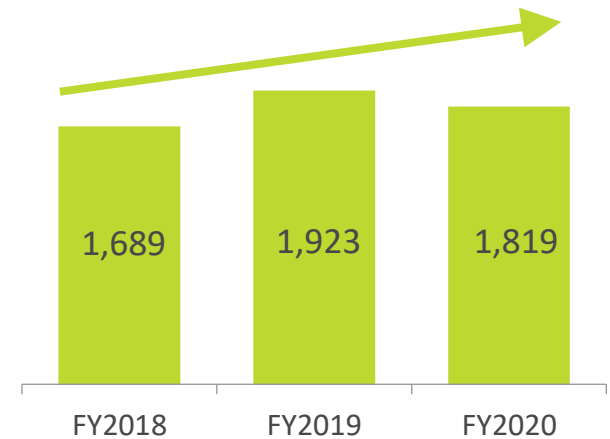
**Iron Ore Derivatives Volume**  
 ('000 contracts)



**Freight Derivatives Volume**  
 ('000 contracts)



**Rubber Futures Volume**  
 ('000 contracts)



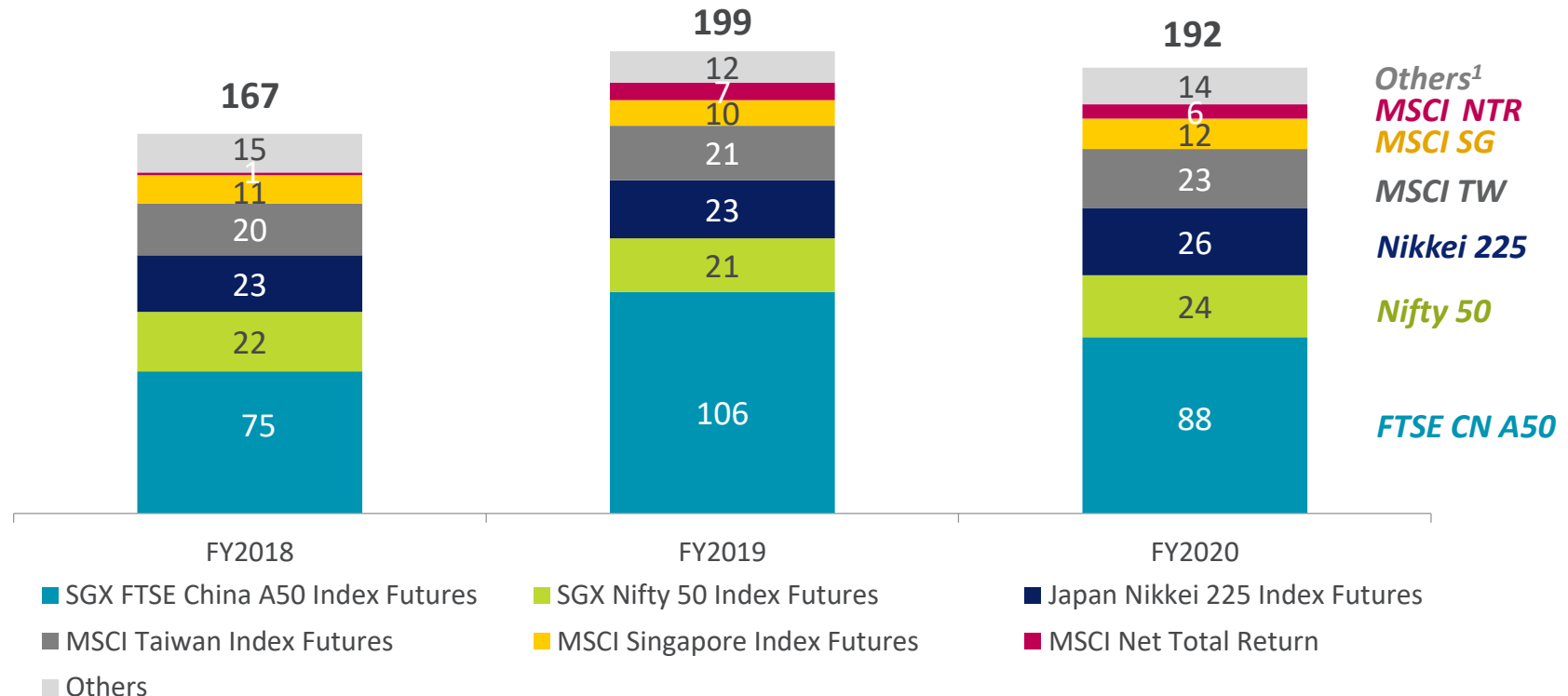
Note: All figures in \$ millions unless otherwise stated and may be subject to rounding

# Equities – Equity Derivatives

**Equities**  
**\$760M up 14% y-o-y**

- Equity derivatives down 3% y-o-y. Higher volumes in MSCI SG, NK 225, Nifty 50, and MSCI Taiwan futures, offset by lower volumes in our FTSE China A50 futures.
- Overnight T+1 volumes increased >25%, contributing to ~17% of total equity derivatives volumes

**Equity Derivatives Volume (M contracts)**

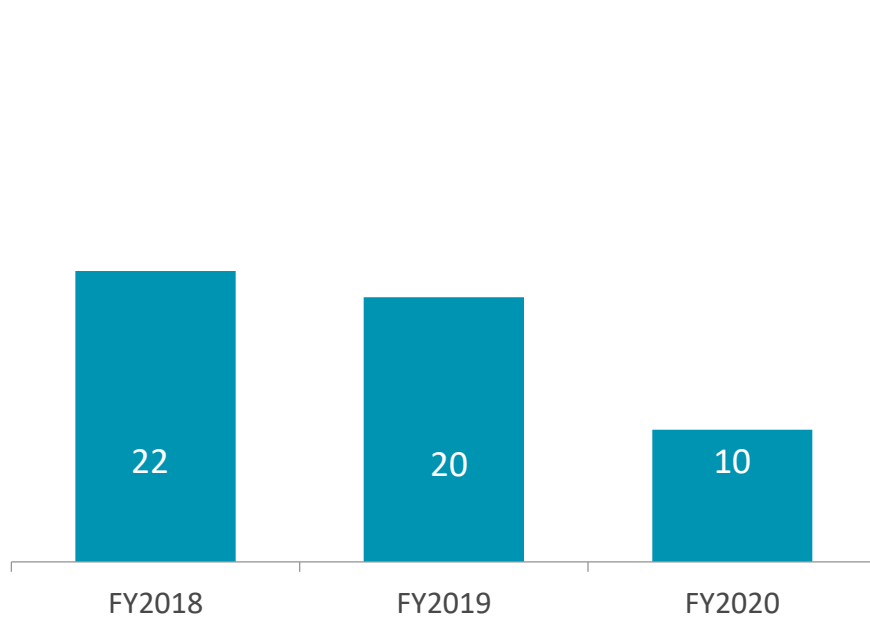


# Equities – Cash Equities Listings

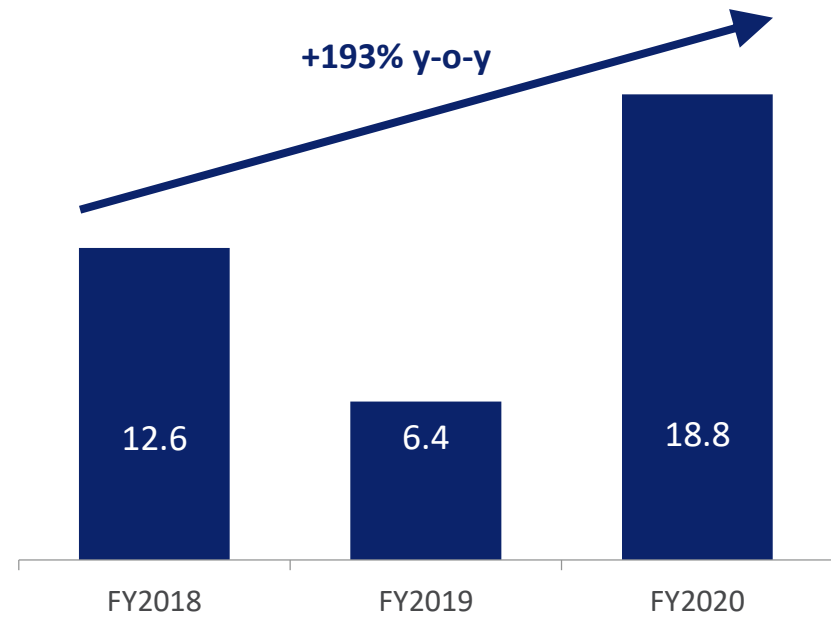
**Equities**  
**\$760M up 14% y-o-y**

- Listing revenue at \$35M, down 4%
- IPO funds raised \$2.3B in FY2020, up from \$1.7B a year ago
- Secondary equity funds raised \$16.5B, up from \$4.7B a year ago

No. of New Equity Listings



Total Equity Funds Raised (\$B)



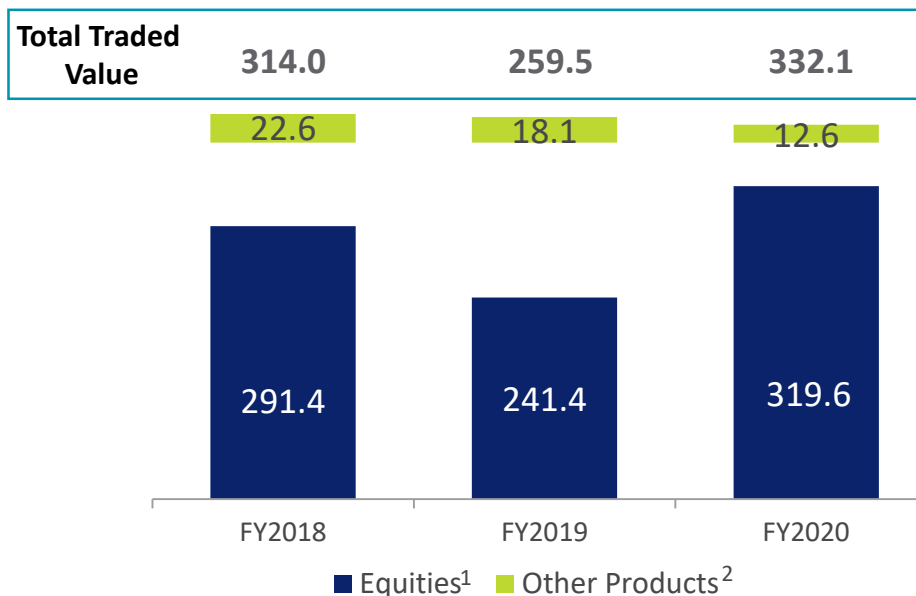
Note: All figures in \$ millions unless otherwise stated and may be subject to rounding

# Equities – Cash Equities Trading & Clearing

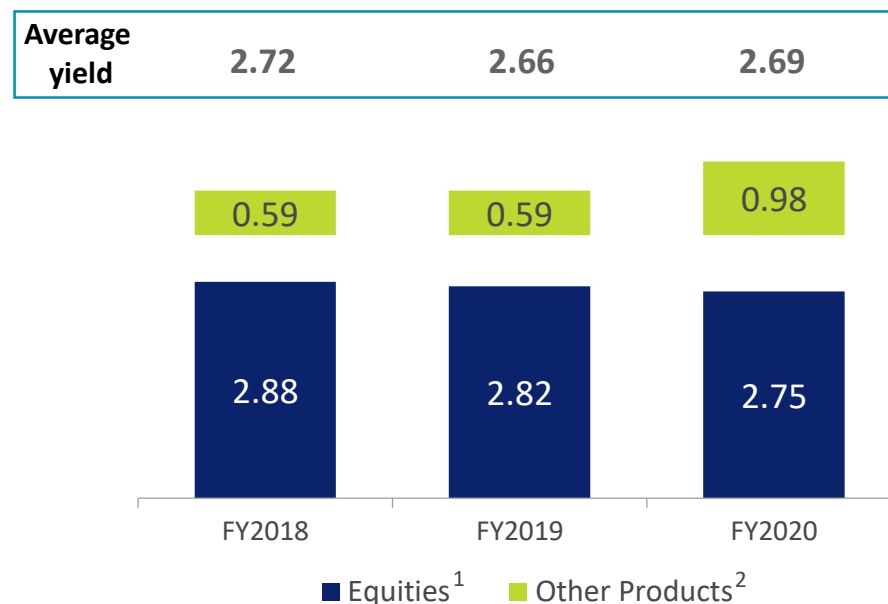
**Equities**  
**\$760M up 14% y-o-y**

- Higher activity from all customer segments
- Total traded value increased by 28% to \$332.1B
- Average Clearing Fee for Securities up from 2.66bps to 2.69bps

**Securities Total Value Traded (\$B)**



**Average Clearing Fee by Products (bps)**



Note: All figures in \$ millions unless otherwise stated and may be subject to rounding

<sup>1</sup> Equities include ordinary shares, real-estate investment trusts and business trusts

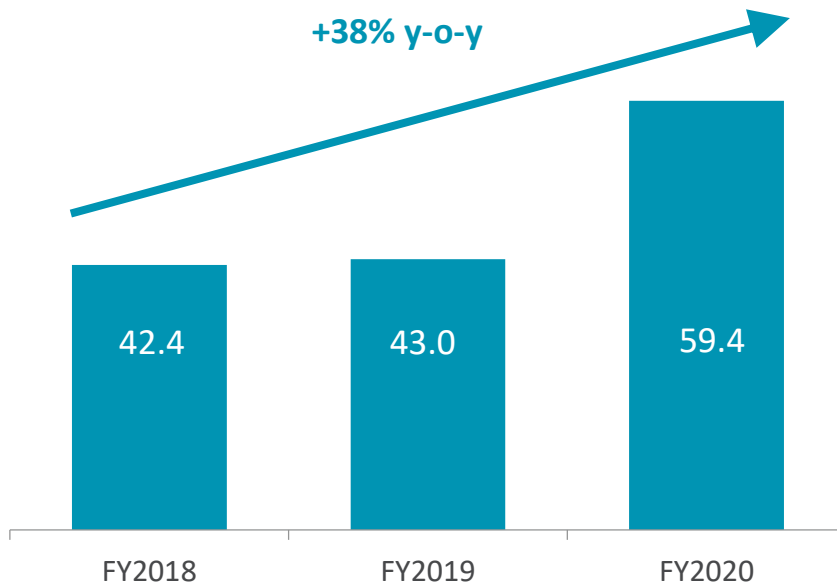
<sup>2</sup> Other products include structured warrants, exchange-traded funds, daily leverage certificates, debt securities, and American depository receipts

# Data, Connectivity & Indices

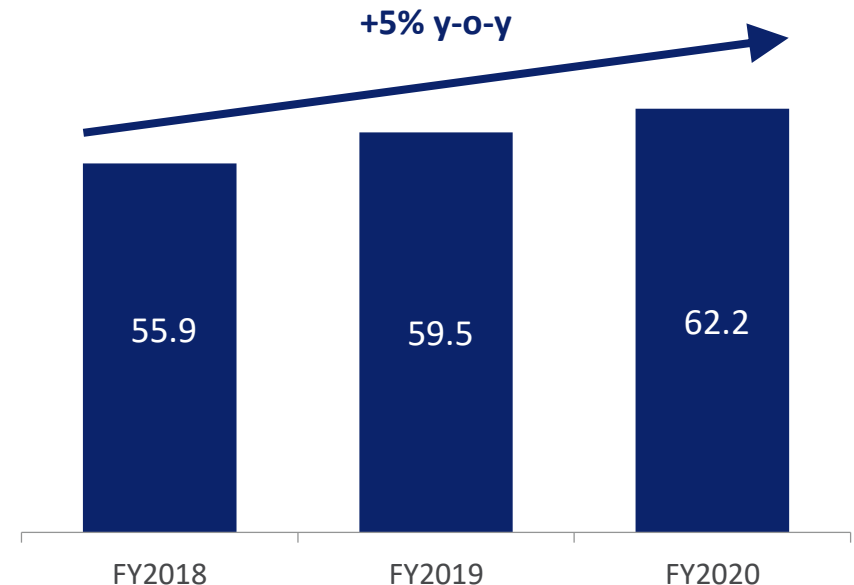
**Data, Connectivity & Indices**  
**\$122M ↑ 19% y-o-y**

- Market data and Indices revenue up 38% to \$59M
- Revenues from Scientific Beta (SB) since February of \$14M
- Connectivity revenue up 5% to \$62M from continued growth in colocation services business and increase in derivatives connectivity subscriptions
- Scientific Beta to develop smart green solutions for climate risk management

Market Data and Indices Revenue (\$M)



Connectivity Revenue (\$M)



Note: All figures in \$ millions unless otherwise stated and may be subject to rounding



# Thank You

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