

SGX Presentation to Investors

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17 June 2020

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 Asia Pacific
FOW International Awards 2019

Exchange of the Year 2019
Regulation Asia

**Financial Metals Service Provider
of the Year**
*Standard & Poor's Global Platts Awards
2019*

**Best FX Exchange in Asia and Best FX
Clearing House in Asia**
FX Week 2019

Exchange of the Year
Energy Risk Asia Awards 2018

Derivatives Exchange of the Year
Asia Risk Awards 2018

AsiaPac Derivatives Exchange of the Year
Global Capital 2018

- High operating margin of 51% in FY2019
- High ROE of 36% and Operating cash flow of 39 cents per share
- Dividend of 30 cents per share
- Most liquid international market for pan-Asian listed derivatives
- Most international exchange in Asia with 42% 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

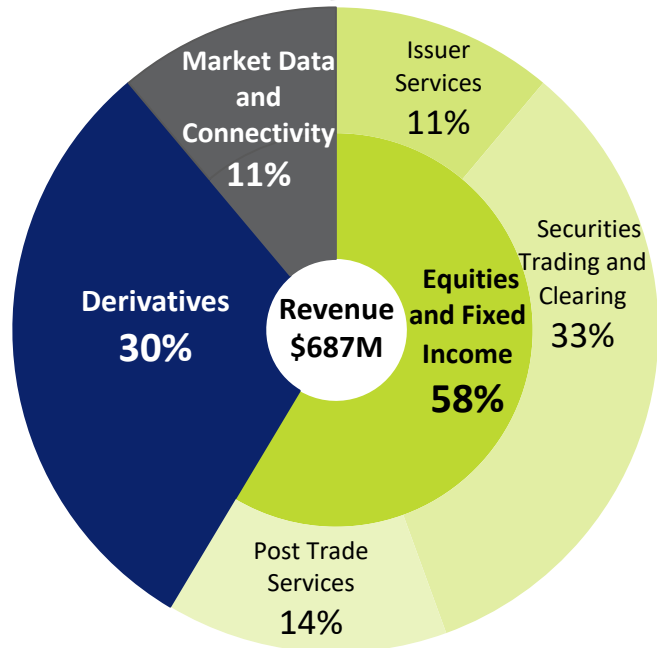
Key roles of our International offices

- Our key clients include: Sell-side participants, Interdealer brokers, Corporate trade clients, Institutional investors, Asset managers and Proprietary Trading Groups. T+1 volumes increased 40% y-o-y in FY2019.
- 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.

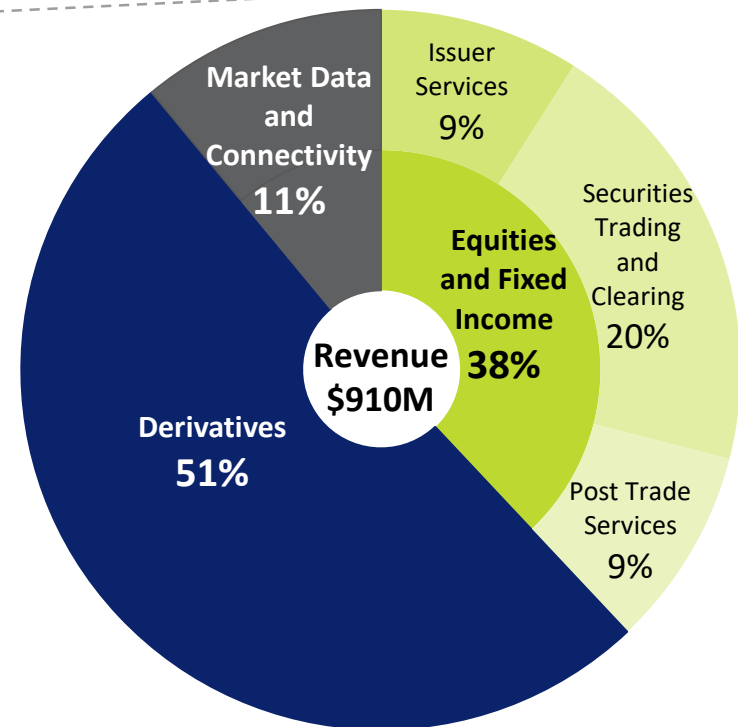
Successfully achieved growth in revenues

Revenue contribution from Derivatives grew from 30% in FY2014 to 51% in FY2019. Total revenue grew 32% during the same period.

FY2014 Revenue Breakdown



FY2019 Revenue Breakdown

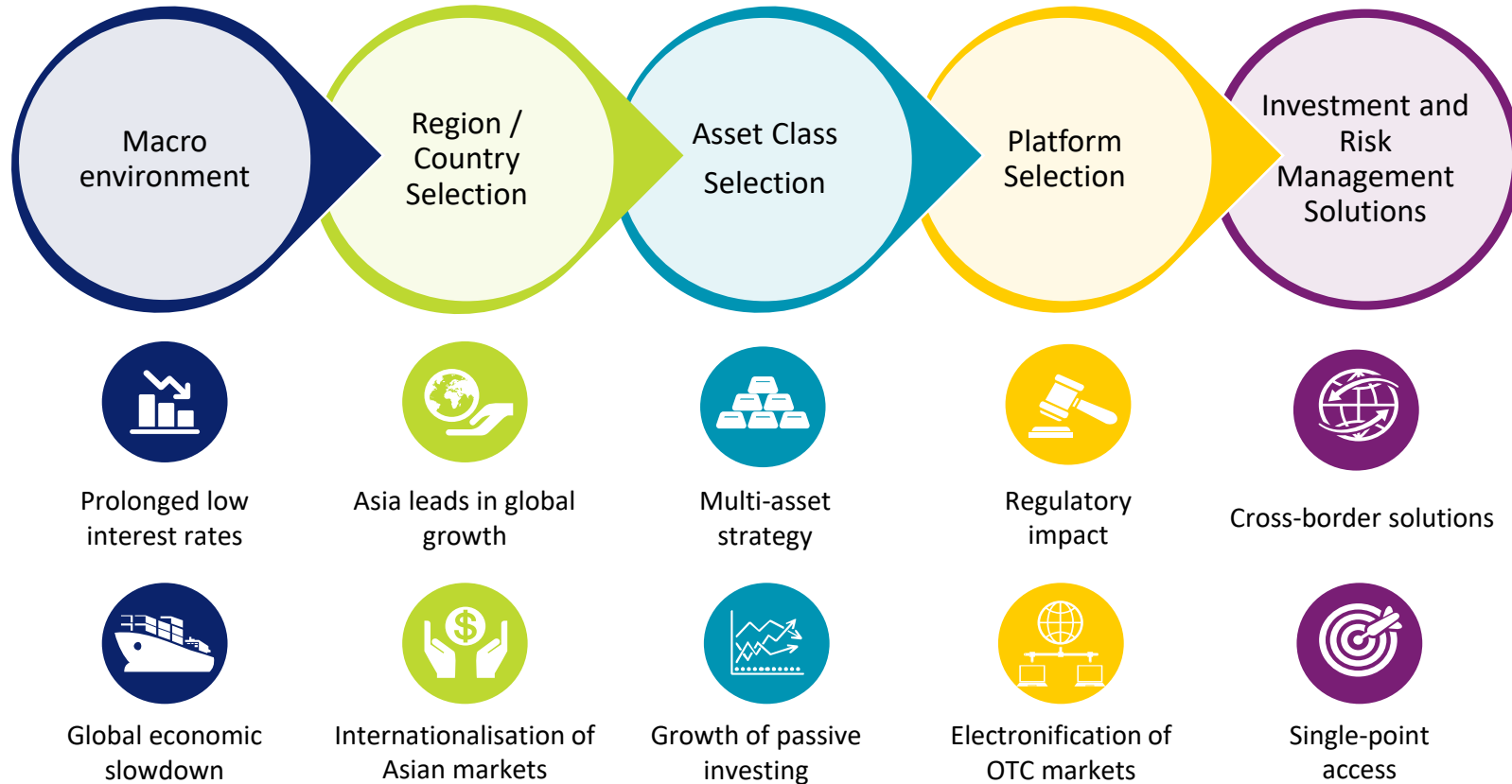


Net Profit: \$320 million

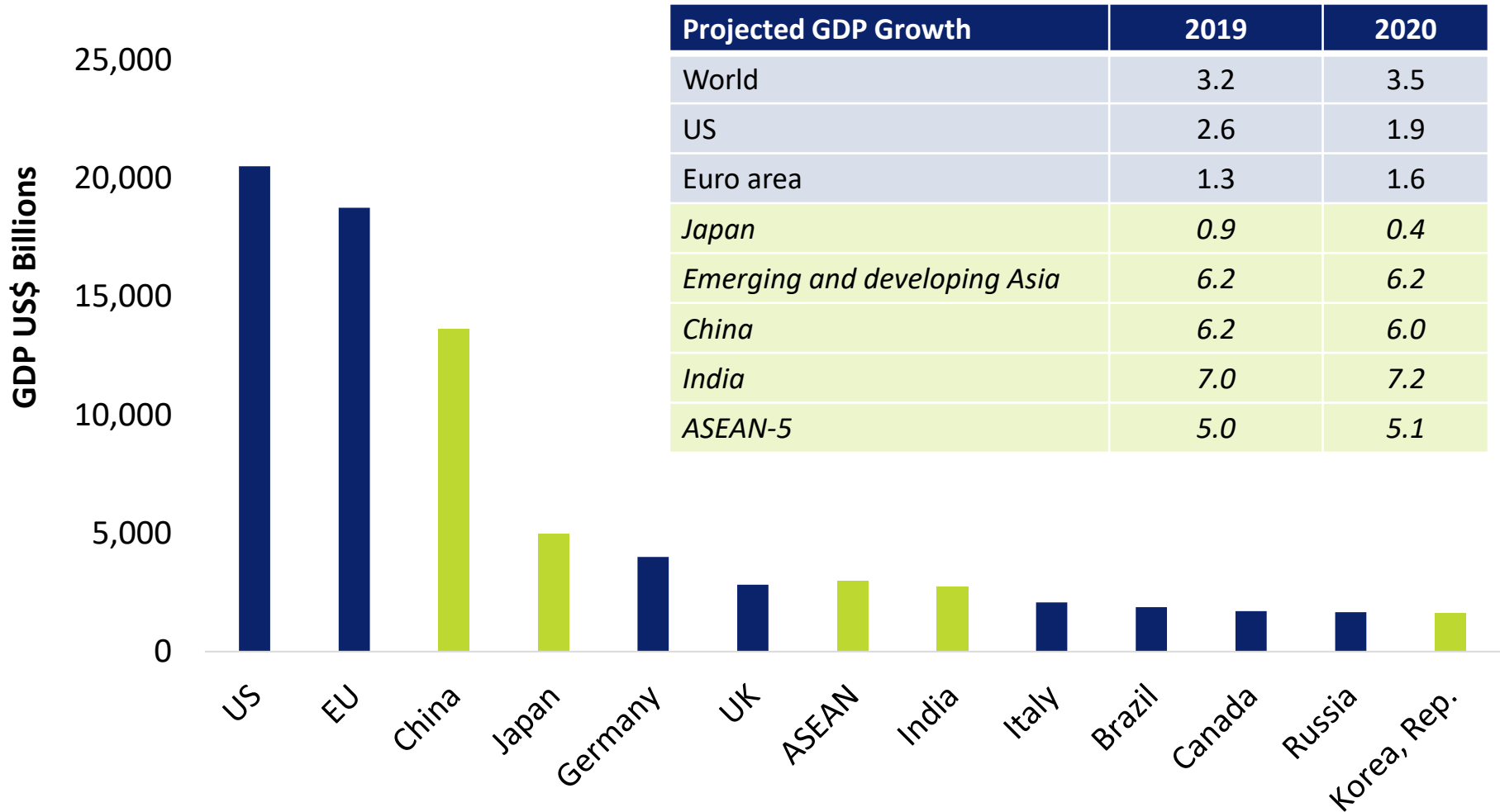
Net Profit: \$391 million

Note: Numbers may be subject to rounding
Source: SGX

Macro and investor trends shaping markets today



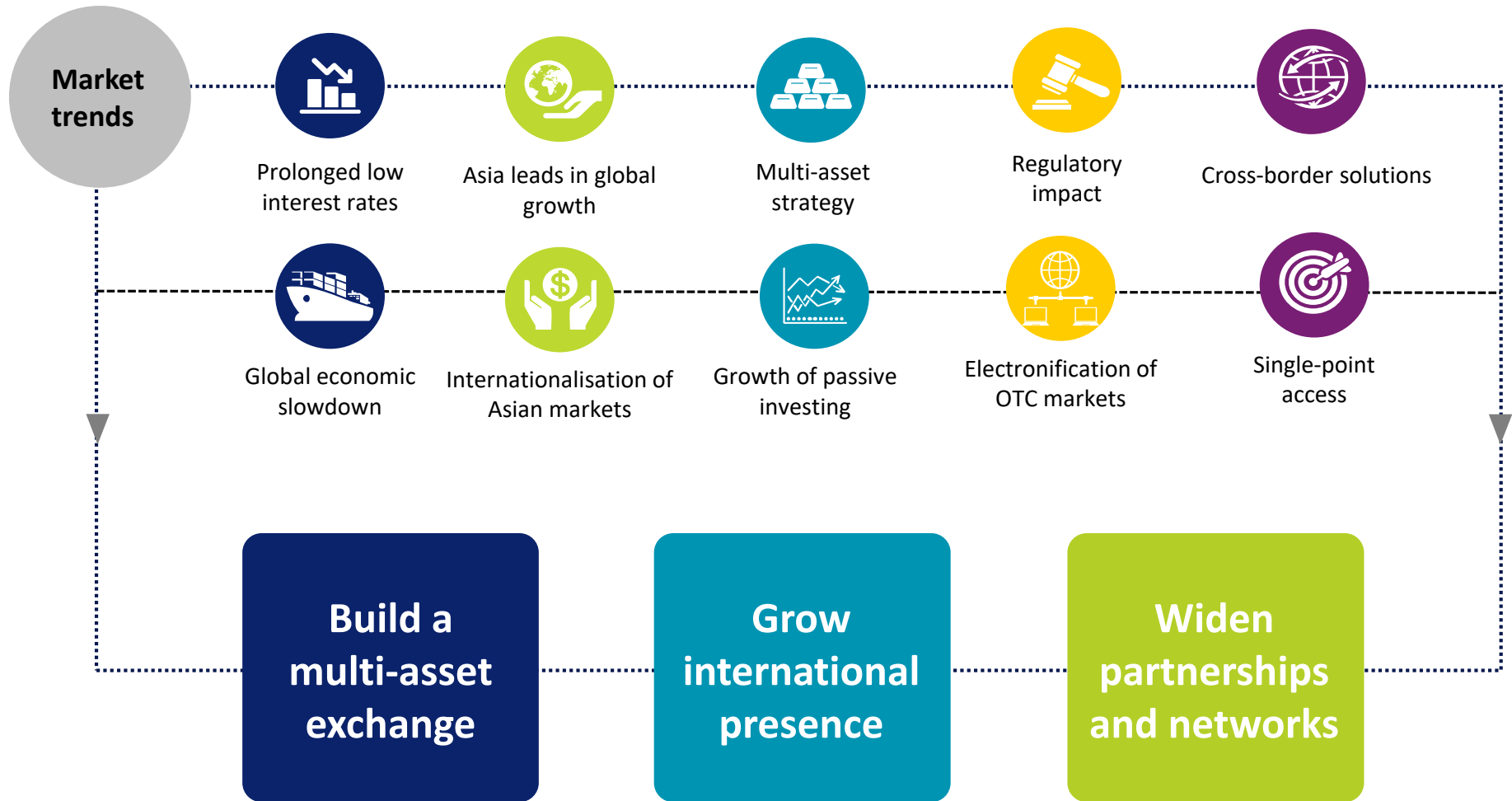
Investors seek access to Asia



Projected GDP Growth	2019	2020
World	3.2	3.5
US	2.6	1.9
Euro area	1.3	1.6
<i>Japan</i>	<i>0.9</i>	<i>0.4</i>
<i>Emerging and developing Asia</i>	<i>6.2</i>	<i>6.2</i>
<i>China</i>	<i>6.2</i>	<i>6.0</i>
<i>India</i>	<i>7.0</i>	<i>7.2</i>
<i>ASEAN-5</i>	<i>5.0</i>	<i>5.1</i>

Source: World Bank, IMF

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



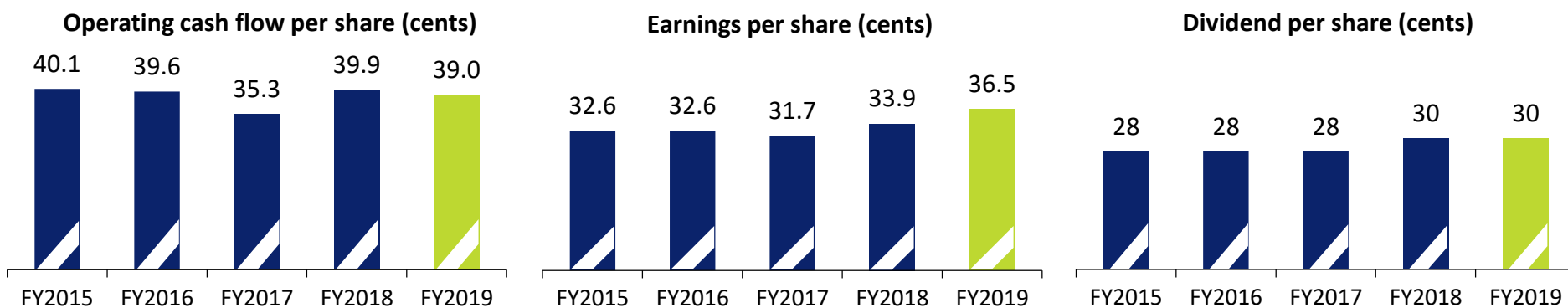
Our strengths as a multi-asset marketplace



Robust financials

- High operating profit margin of 51%
- High ROE of 36% and Operating cash flow of 39 cents per share
- Dividend of 30 cents per share

	FY2015	FY2016	FY2017	FY2018	Y-o-Y Change	FY2019
Revenue (\$ million)	779	818	801	845	+8%	910
EBITDA (\$ million)	459	469	460	486	+8%	524 ¹
EBITDA margin	59%	57%	57%	58%	-	58%
Operating profit (\$ million)	402	409	402	425	+9%	461
Operating profit margin	52%	50%	50%	50%	+2%	51%
Net profit (\$ million)	349	349	340	363	+8%	391
Return on equity	37%	36%	34%	34%	+6%	36%



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

Looking ahead... positioning for growth and scale



- Capture the digitalisation of the Fixed Income markets and rising convergence of OTC and listed FX and Commodity markets



- Aggregate and service varied demands from retail and institutional customer segments accessing our continuum of international equities products



- Focus on building capabilities in our Index Business to position ourselves for growth, amid a global shift towards passive investing



- Holistically serve all customer segments with the full spectrum of SGX products and services across asset classes



- Continue to expand globally and use our international presence to facilitate capital raising from key markets

Fixed Income, Currencies and Commodities (FICC)

A leading Fixed Income listing venue

	Size of Market 	Singapore 	SGX 
Fixed Income	<ul style="list-style-type: none">▪ Asia (ex-Japan) bond market of US\$14 trillion▪ Shift towards electronic trading▪ Regulatory trends favour shift to on-exchange clearing	<ul style="list-style-type: none">▪ Strong distribution network to global investor base with US\$2.4 trillion of AUM in Singapore	<ul style="list-style-type: none">▪ >US\$2.2T amount issued, with more than 6,600 listed bonds from over 56 countries in 26 currencies▪ Launched SGX Bond Pro, an electronic platform for Bond Trading

Key SGX Highlights

>6,600 bonds

listed by 1,600 issuers from over 56 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

Currencies

Size of Market

- US\$5 trillion traded daily
- Asian NDF, excluding CNH, is a \$73 billion DAV market with the potential to be futurised
- Largest off-exchange (OTC) market globally
- Regulatory trends favour shift to on-exchange clearing

Singapore

- US\$500 billion traded daily
- Largest currency center in Asia Pacific, third largest globally
- Leading global trading venue for key Asian currencies

SGX

- 21 currency futures and options contracts
- >70% market share in USD/CNH and > 40% market share in INR/USD
- Innovative FlexC FX futures offering
- Investment in BidFX

Key SGX Highlights

19

Futures

2

Options

Diverse Asian
FX suite

144%

Total Volume –
CAGR
Nov 13 – Mar 20

US\$7.0Bn

Open Interest value
(Mar 2020)

~US\$1.3T

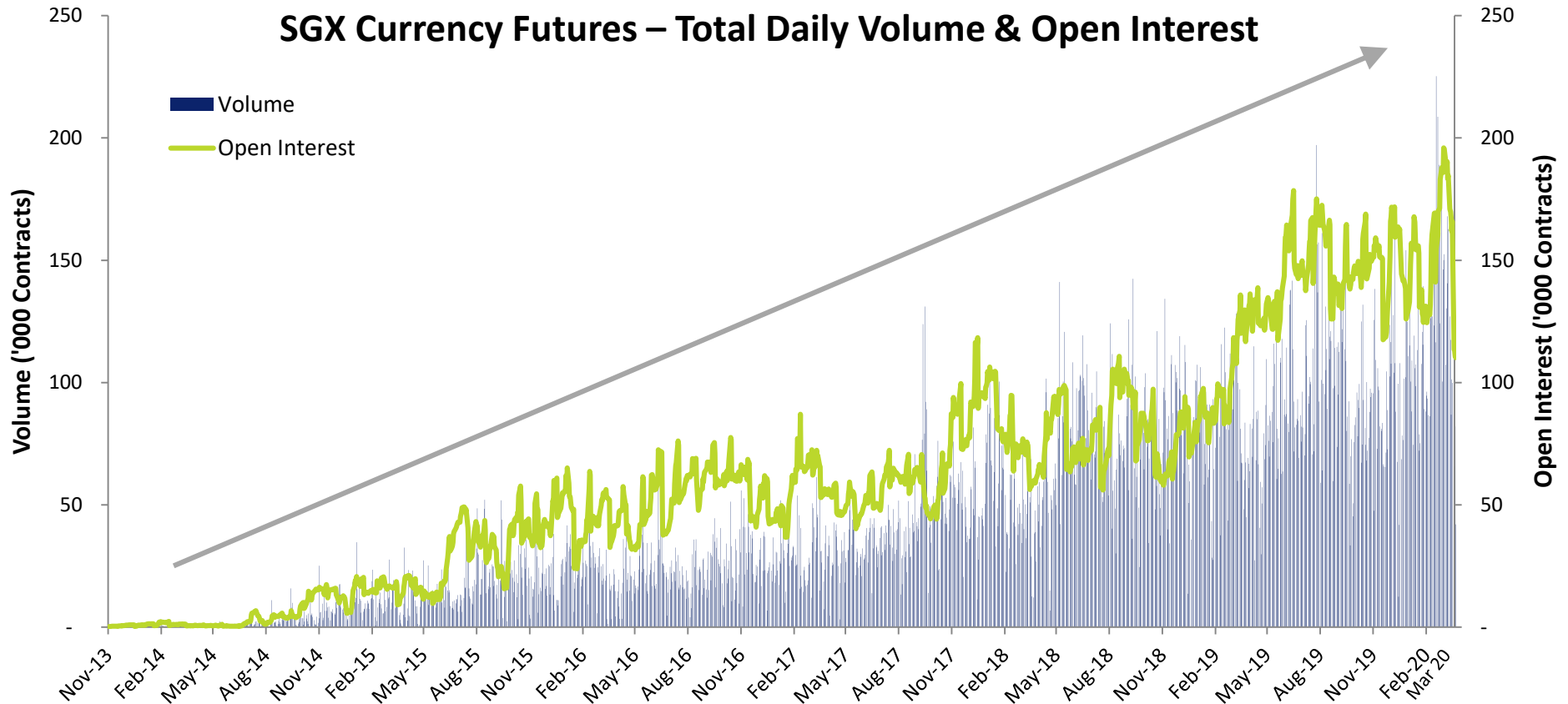
Notional value traded in
2019
up 44% y-o-y



Expanding Network

Currency Futures as a growth driver

144% volume CAGR since November 2013



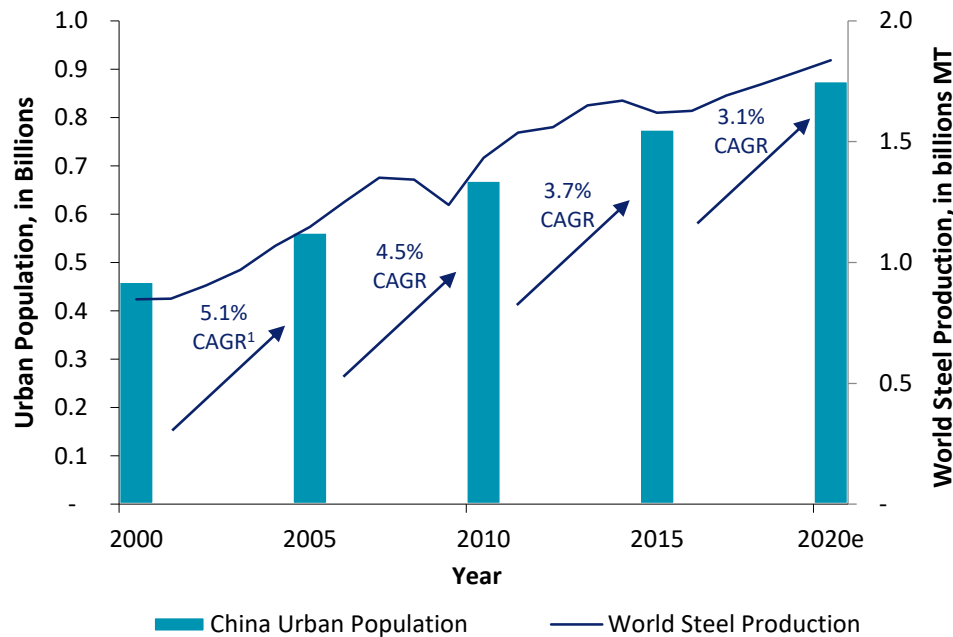
■ Asia's Best FX Exchange & Clearing House – by FX Week (2018 and 2019)

Note: Data as at 31 March 2020

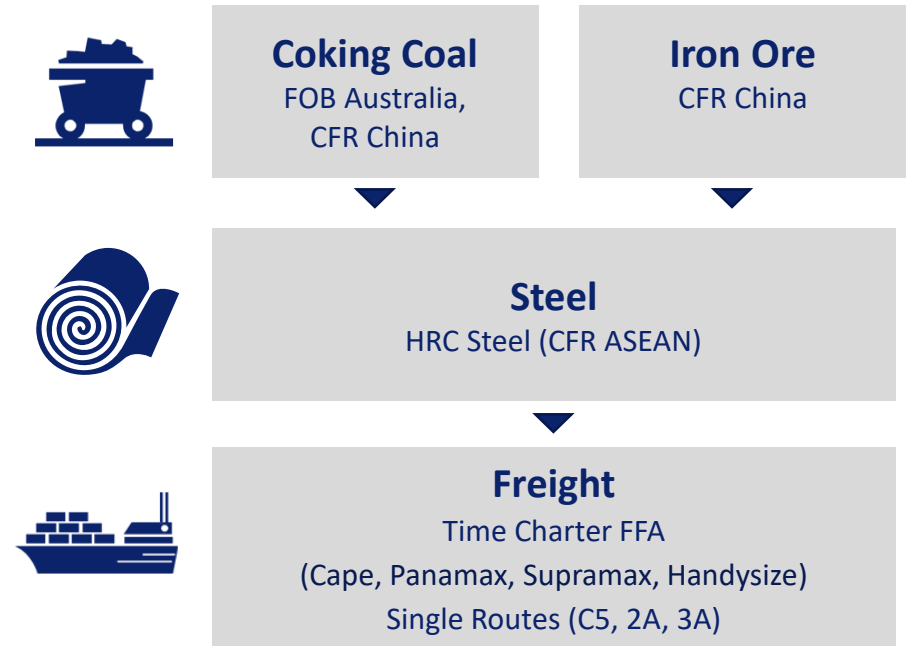
Extensive Suite Of Commodities Products

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

Urbanisation and Steel Production






Price-Discovery Centre For The Steel Value Chain



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

¹ CAGR in chart relates to growth of China's Urban Population

The leading offshore Iron Ore risk management hub

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

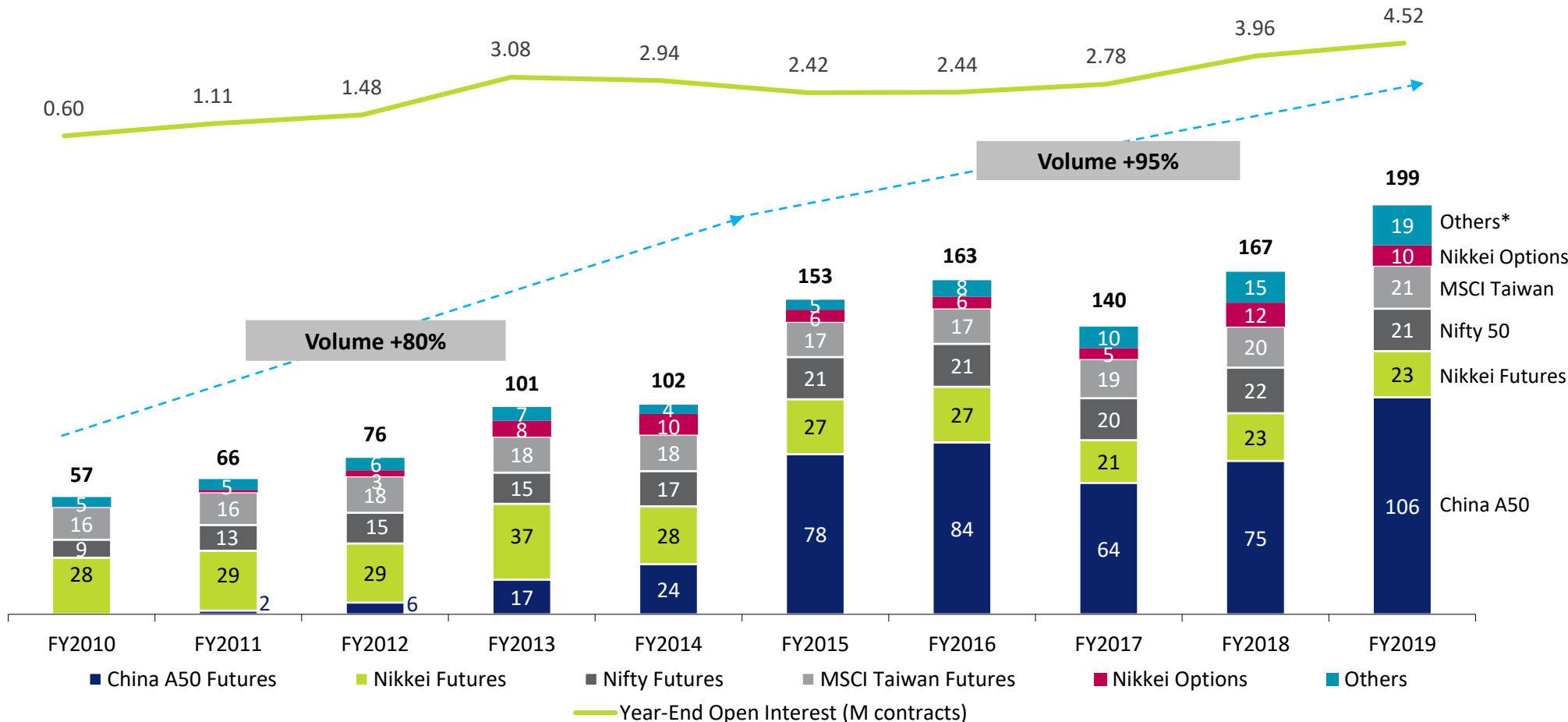
Potential to grow

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

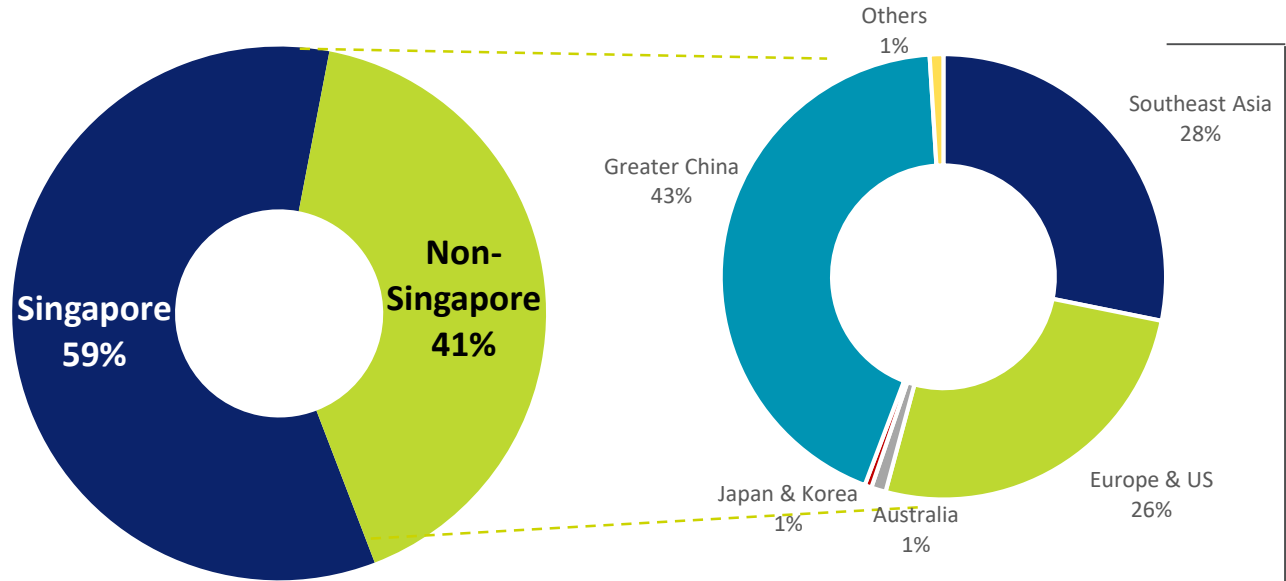
Volumes and open interest, in millions



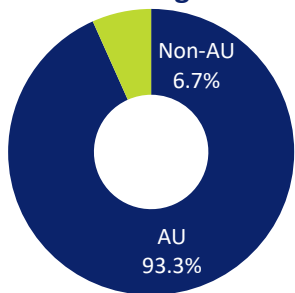
SGX is the Most International Exchange

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

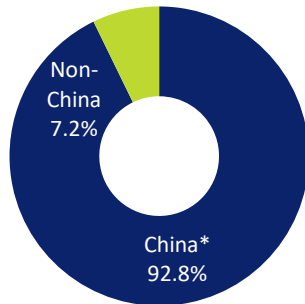
Singapore Exchange
716 Listed Companies
Market Capitalization
US\$537 billion



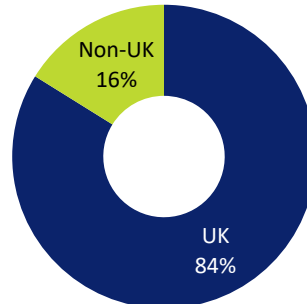
Australia Securities Exchange



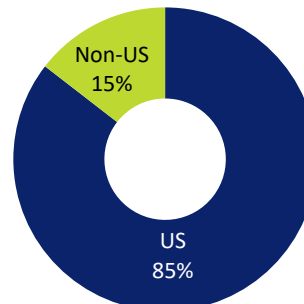
Hong Kong Stock Exchange



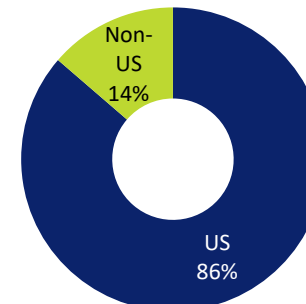
London Stock Exchange



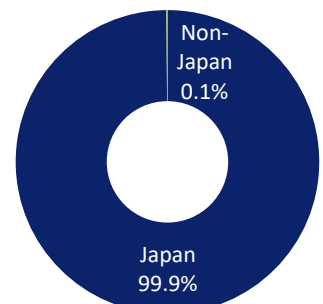
NASDAQ



New York Stock Exchange



Tokyo Stock Exchange



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

Top Sectors on SGX

Consumer



PE: 14x

- Includes food & beverage, retail and others
- 139 companies with market cap of US\$42 billion

Technology



PE: 17x^

- 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\$46 billion

Healthcare



PE: 26x*

- Full range of companies from pharmaceuticals, healthcare services to medical devices technology
- 35 companies with market cap of US\$46 billion

Maritime, Offshore Services & Energy



PE: 12x

- Asia's largest cluster of listed companies
- 62 companies and 2 business trusts with market cap of US\$14 billion

Commodities



PE: 11x

- Includes Agri-commodities, Mineral & Oil & Gas Companies
- 33 companies with market cap of US\$22 billion

Real Estate



PB: 1.0x

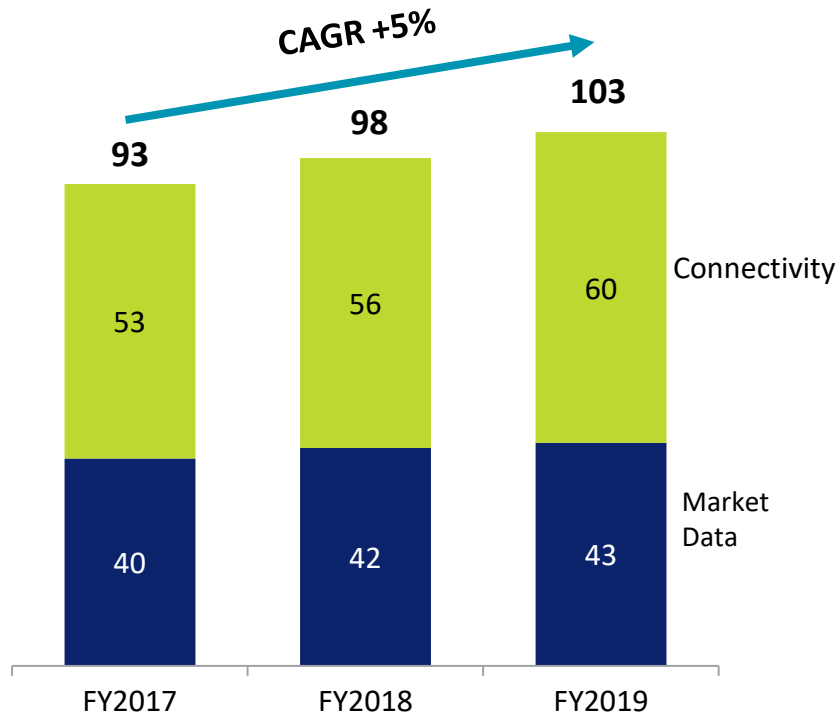
- Asia's broadest range of real estate companies and property trusts covering global real estate assets
- 110 real estate companies and property trusts with market cap of US\$101 billion

Source: Bloomberg & Singapore Exchange (Mar 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

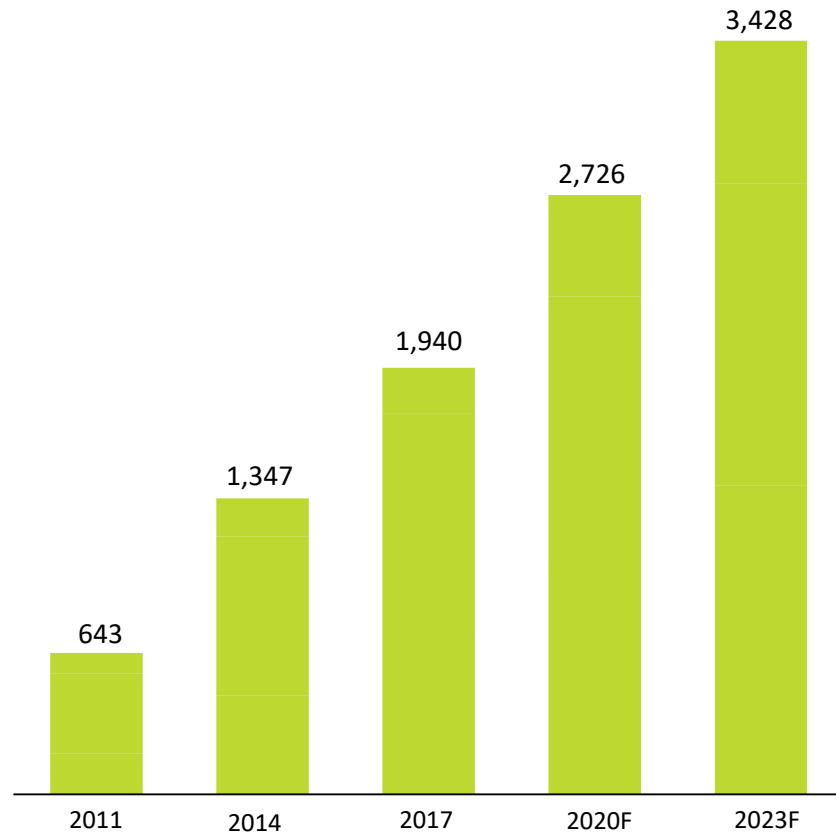
- **SGX iEdge Domestic Indices**
 - SGX Thematic indices e.g. S-REIT 20
 - SGX Sustainability index
- **SGX iEdge Regional Indices**
 - SGX Developed Asia Quality Dividend Index
 - SGX APAC Dividend REIT
- **Smart Beta Indices**
 - Developed by Scientific Beta

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⁽¹⁾, and there is further room for growth.



Global Factor & Smart Beta AUM (USD billion)⁽¹⁾



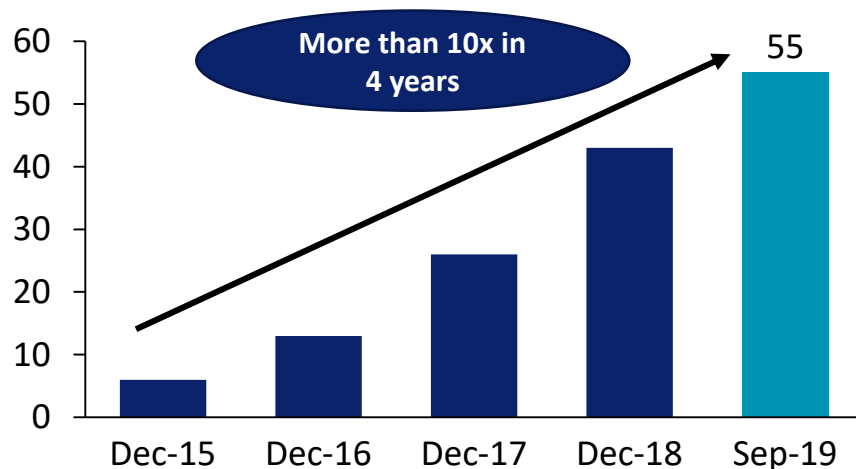
Recent acquisition of Scientific Beta will broaden SGX's index offering through the fast-growing 'Smart Beta' index space



- 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)



Acquisition 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

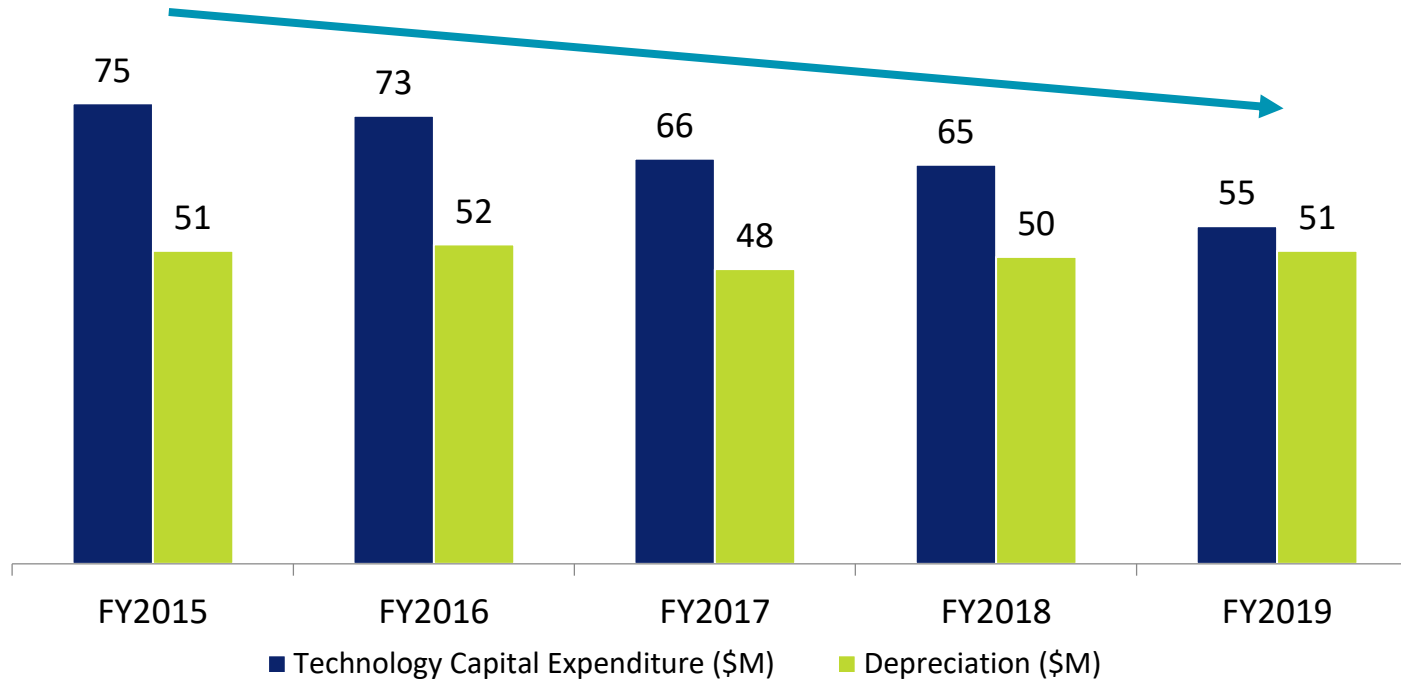
Indices



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

Major technology platforms have been built to support our multi-asset strategy

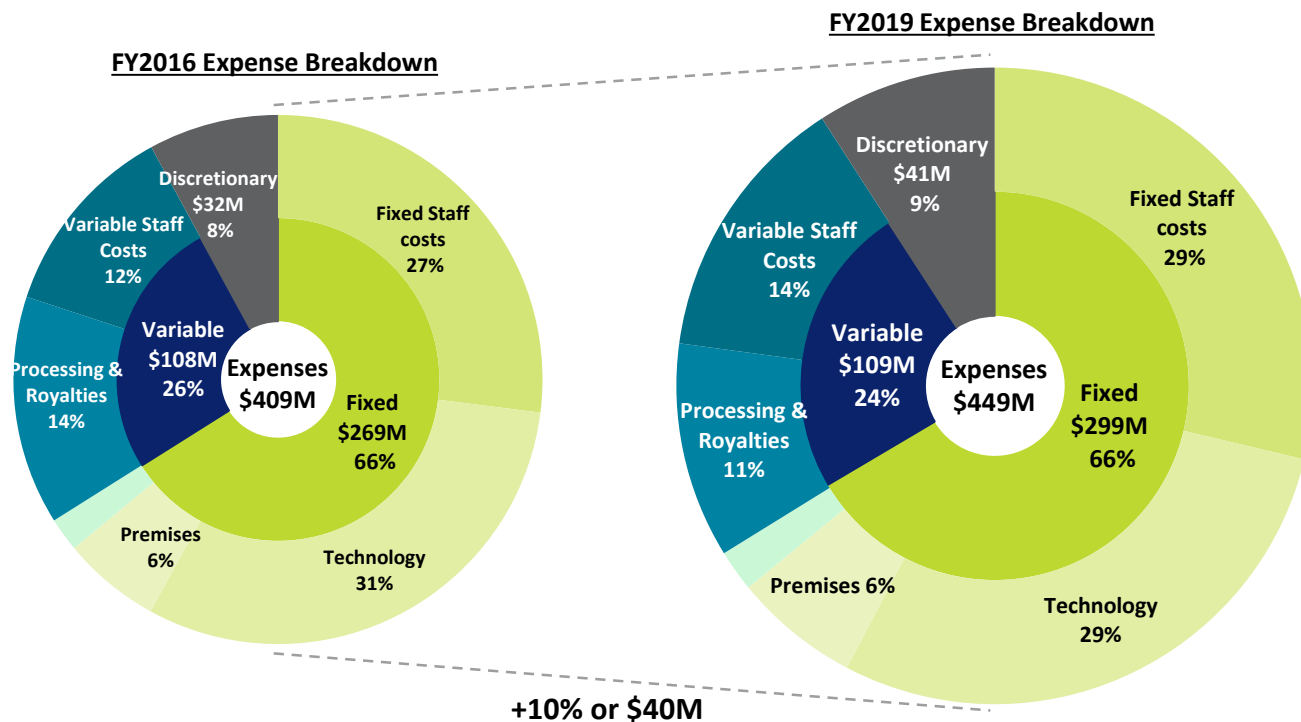
- FY2019 CAPEX of \$55M, below guidance of \$60M to \$65M
- Declining annual CAPEX – FY2020 CAPEX is expected to be between \$45M to \$50M



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

Disciplined in our expenditure

- Investments in building capabilities to support multi-asset strategy
- FY2019 expense of \$449M, up 7% from a year ago, CAGR of 3% from FY2016-FY2019
- FY2020 Operating Expense Guidance: \$485M to \$495M



- Fixed costs – 66%
Variable costs – 24%
Discretionary costs – 9%
- Variable costs
 - Variable staff cost increase in line with profitability
 - Processing & Royalties expenses are volume-related
 - Royalties are recovered as revenues under licence fees

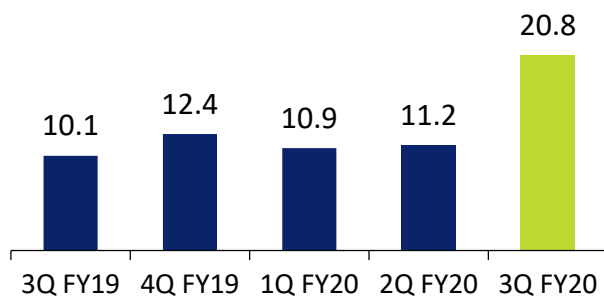
Note: Numbers may be subject to rounding.

Key Financial Indicators (Recent quarters)

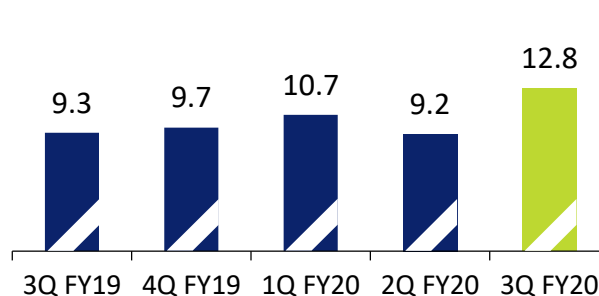
- High operating profit margin, EBITDA margin, and ROE of 55%, 63%, and 44% respectively
- Quarterly dividend per share of 7.5 cents per share
- From FY2021, SGX will report half-yearly financial results; Dividends will continue to be paid quarterly

	3Q FY2019	4Q FY2019	1Q FY2020	2Q FY2020	3Q FY2020
Revenue (\$ million)	229	248	248	231	296
EBITDA (\$ million)	134	139	156	141	186
EBITDA margin	59%	56%	63% ¹	61% ¹	63% ¹
Operating profit (\$ million)	118	123	135	119	163
Operating profit margin	52%	50%	54%	52%	55%
Net profit (\$ million)	100	104	114	99	138
Return on equity	37%	36%	40%	41%	44%

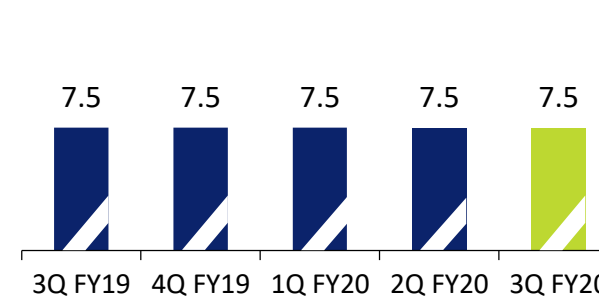
Operating cash flow per share (cents)



Earnings per share (cents)



Dividend per share (cents)



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

Appendix

- Cross margining example
- Shareholder profile
- Dividend history
- 3Q FY2020 Performance

Cross margining efficiencies

Correlated products, margin netting efficiencies

Note:

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

INR/USD
FX futures

33%
Margin
offset

Nifty 50
Index Futures

Nikkei 225
Index Futures

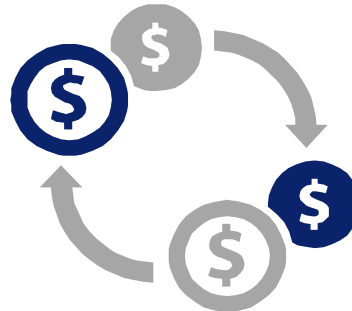
46%
Margin
offset

China A50
Index Futures

USD/CNH
FX futures

31%
Margin
offset

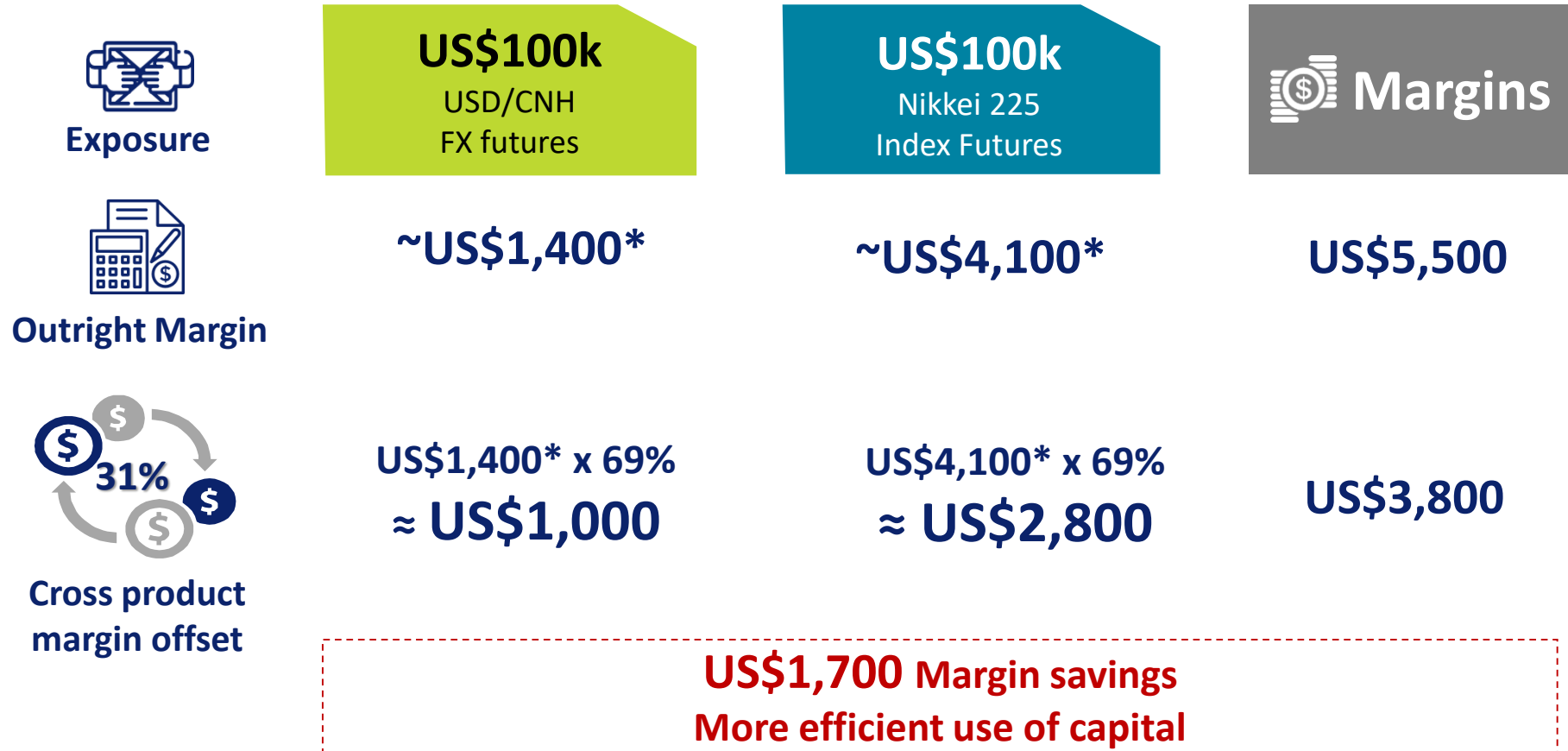
Nikkei 225
Index Futures



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



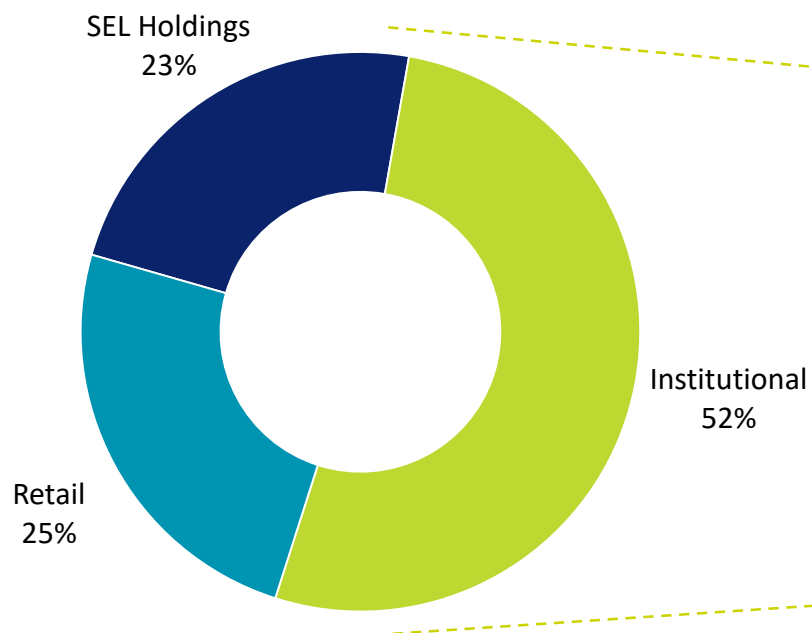
Note: Based on exchange rate as of 3 February 2020

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

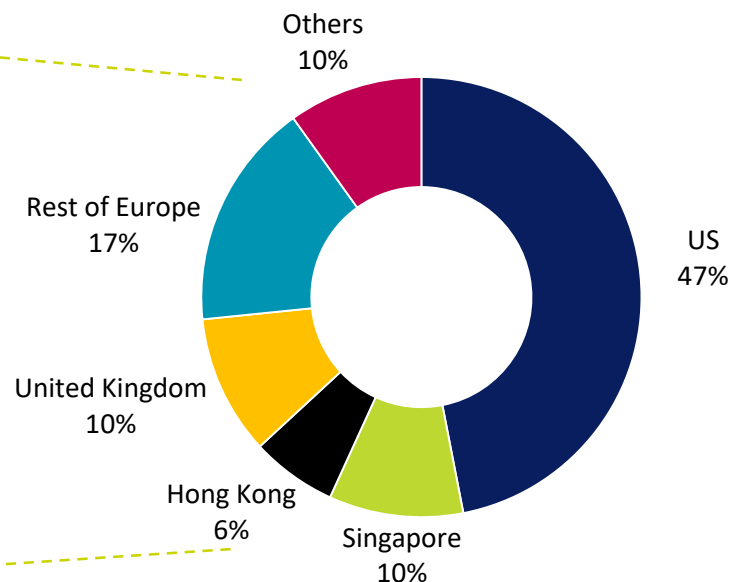
SGX shareholders' profile

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

SGX Shareholder Composition¹



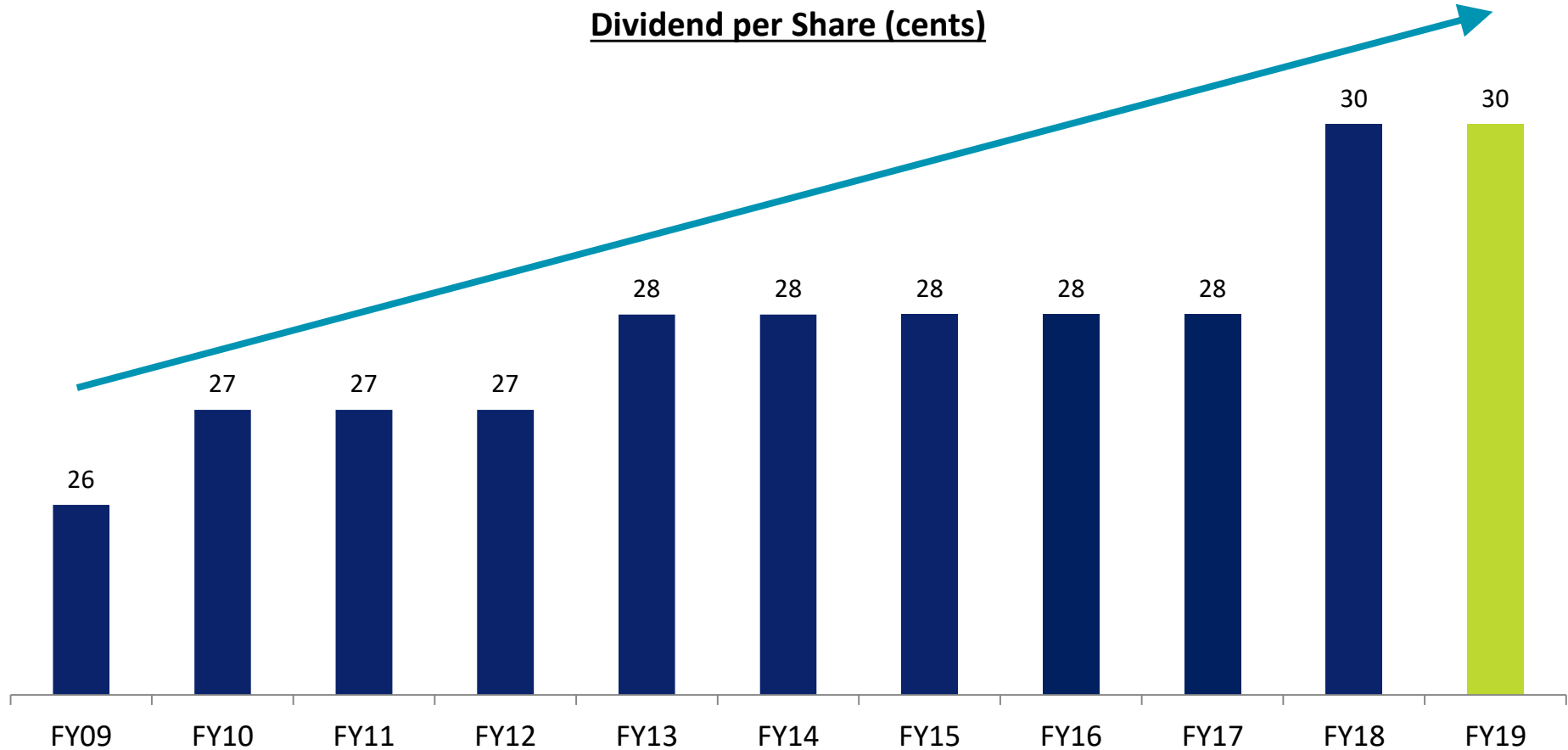
Institutional Shareholding by Geography



Note: Numbers may be subject to rounding.
¹As at 31 March 2020

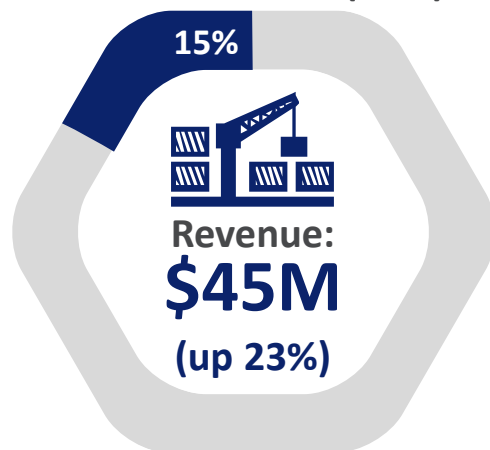
10-Year dividend history

Committed to returning value to our shareholders

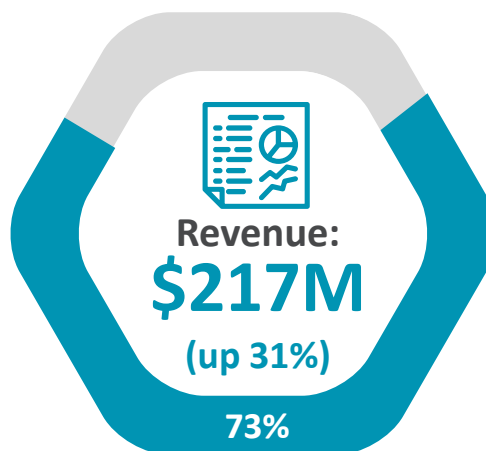


3Q FY2020 Performance

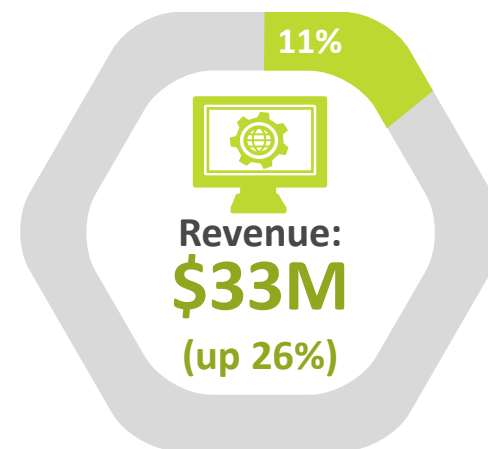
Fixed Income, Currencies & Commodities (FICC)



Equities



Data, Connectivity & Indices (DCI)



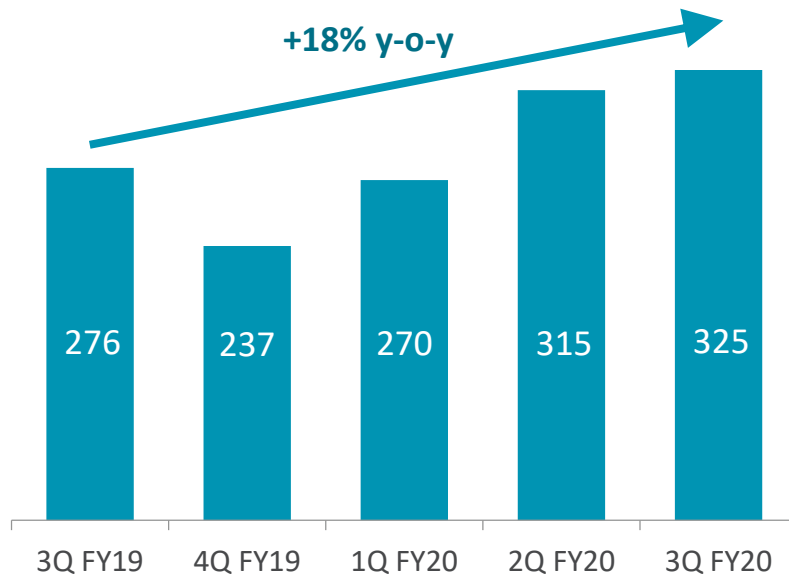
- Uncertainty surrounding the impact from COVID-19 led to higher trading activity on our markets
- SGX's multi-asset solution allowed investors to manage the risks of their Asian equities, currencies, and commodities portfolios
- Our international expansion led to higher T+1 session activity, contributing 20% to total derivatives volumes

FICC – Fixed Income

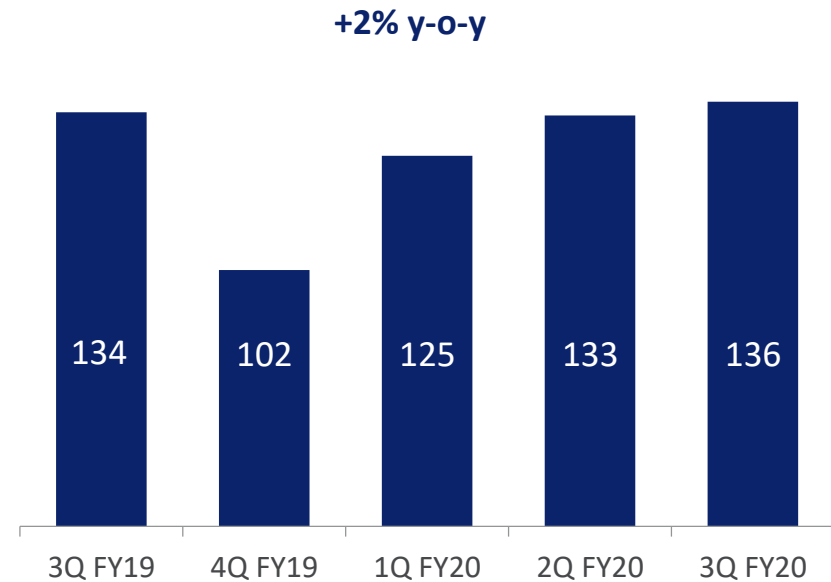
FICC
\$45M ↑ 23% y-o-y

- Number of new bond listings at 325, up 18%
- Total bond amounts issued at \$136B, up 2%
- Attracted bond issuers from Greater China, India and Japan

No. of New Bond listings



Total Bonds Amount Issued (\$B)



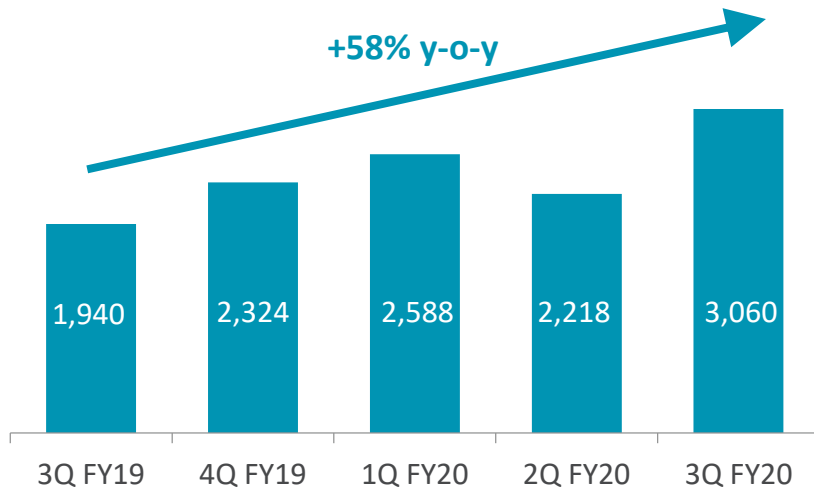
Note: All figures in \$ millions unless otherwise stated and may be subject to rounding

FICC – Currencies

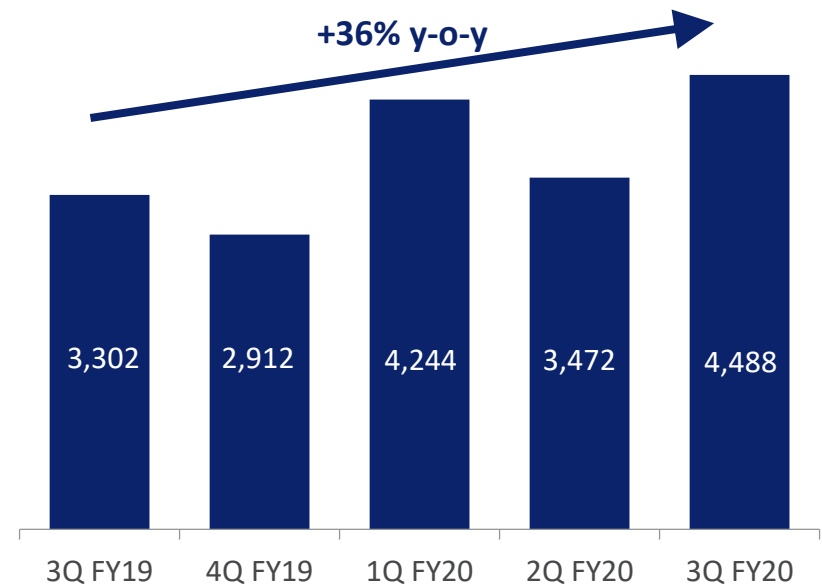
FICC
\$45M ↑ 23% y-o-y

- Currencies volume up 45% to 7.8M contracts
- Overnight T+1 volume increased 6%, contributing to ~28% of total currency volumes
- Quarter-end aggregate open interest at US\$7 billion, up 16% y-o-y

USD/ CNH Volume ('000 contracts)



INR/ USD Volume ('000 contracts)



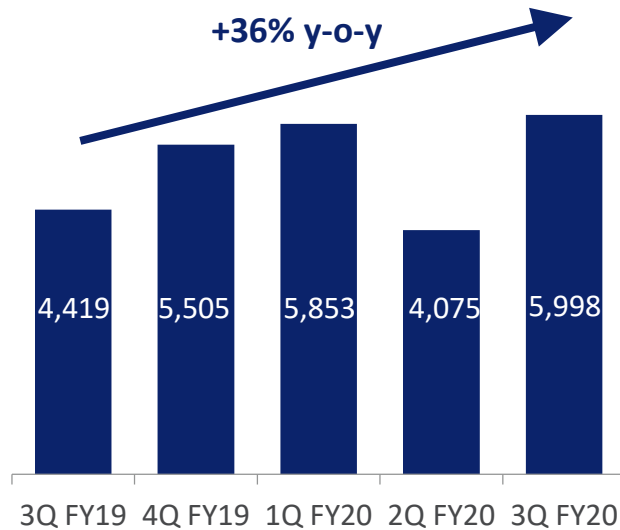
Note: All figures in \$ millions unless otherwise stated and may be subject to rounding

FICC – Commodities

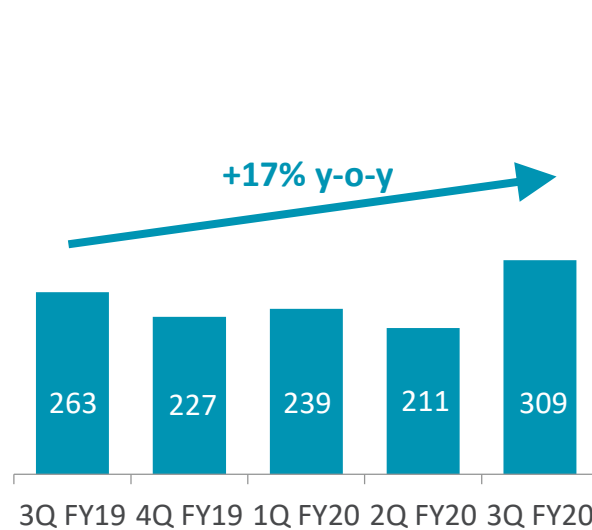
FICC
\$45M ↑ 23% y-o-y

- Iron ore volumes up 36% y-o-y to 6.0M contracts
- Established global benchmark with over 98% market share
- Growing liquidity through greater financialisation

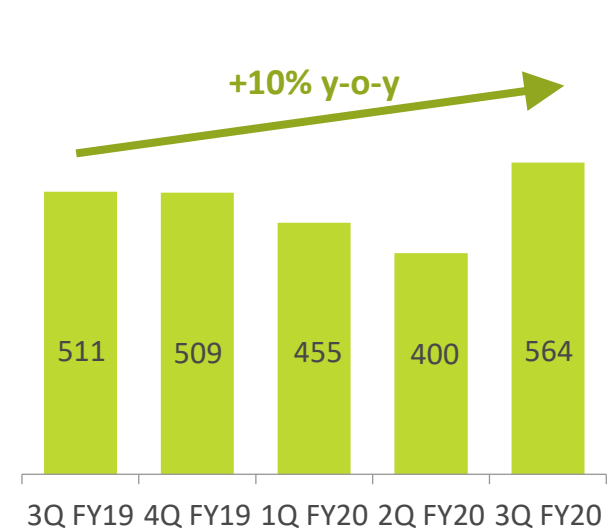
Iron Ore Derivatives Volume
 ('000 contracts)



Freight Derivatives Volume
 ('000 contracts)



Rubber Futures Volume
 ('000 contracts)



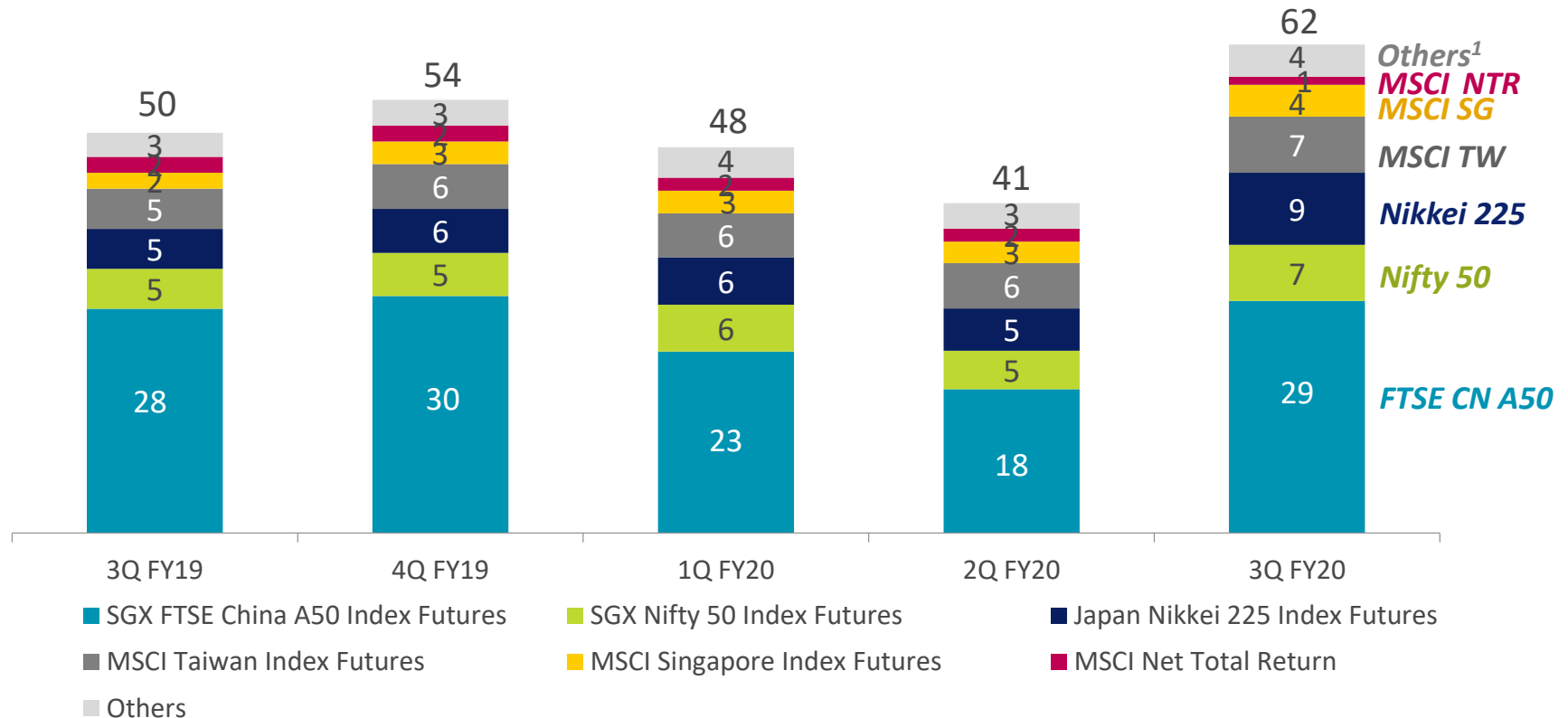
Note: All figures in \$ millions unless otherwise stated and may be subject to rounding

Equities – Equity Derivatives

Equities
\$217M, up 31% y-o-y

- Higher trading volumes in equity derivatives, up 24% y-o-y
- Overnight T+1 volumes contribute ~20% of total equity derivatives volumes

Equity Derivatives Volume (M contracts)

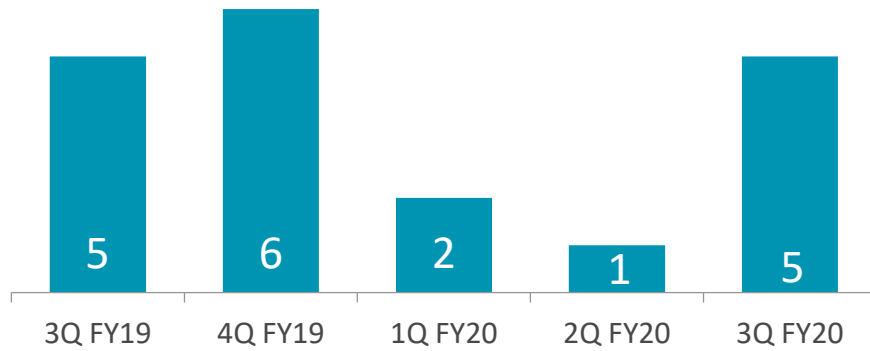


Equities – Cash Equities Listings

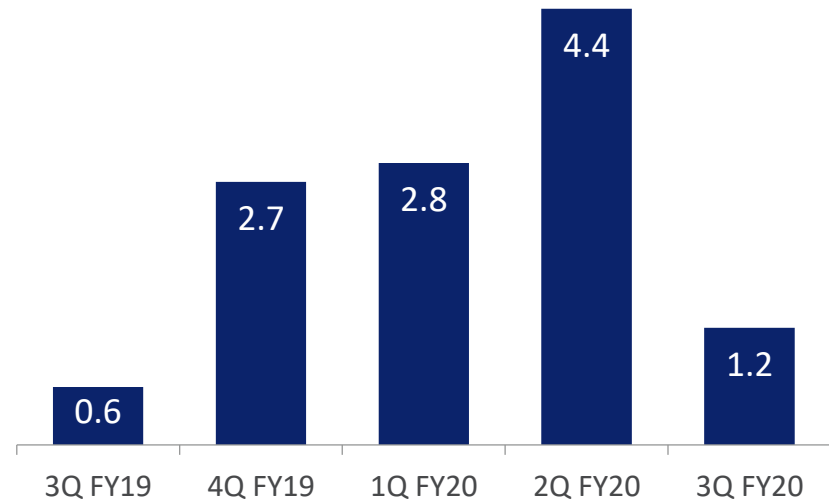
Equities
\$217M, up 31% y-o-y

- Listing revenue at \$9M, down 4%
- IPO funds raised ~\$700M in 3Q
- Total funds raised doubled to \$1.2B

No. of New Equity Listings



Total Equity Funds Raised (\$B)



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

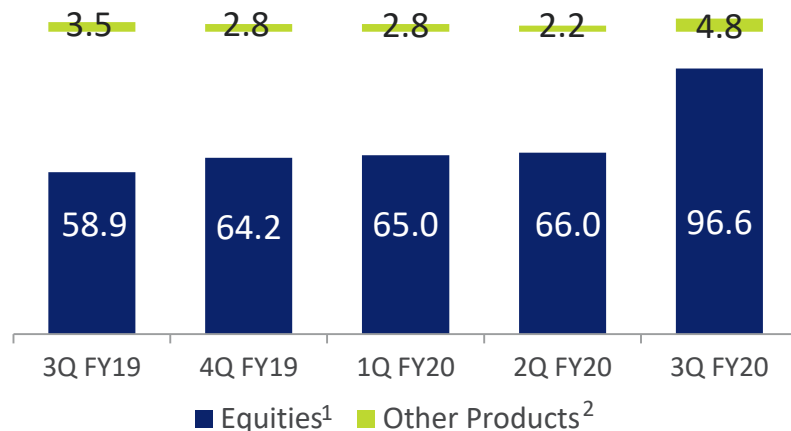
Equities – Cash Equities Trading & Clearing

Equities
\$217M, up 31% y-o-y

- Total traded value increased by 63% to \$101.4B
- Average Clearing Fee for Securities increased from 2.67bps to 2.71bps

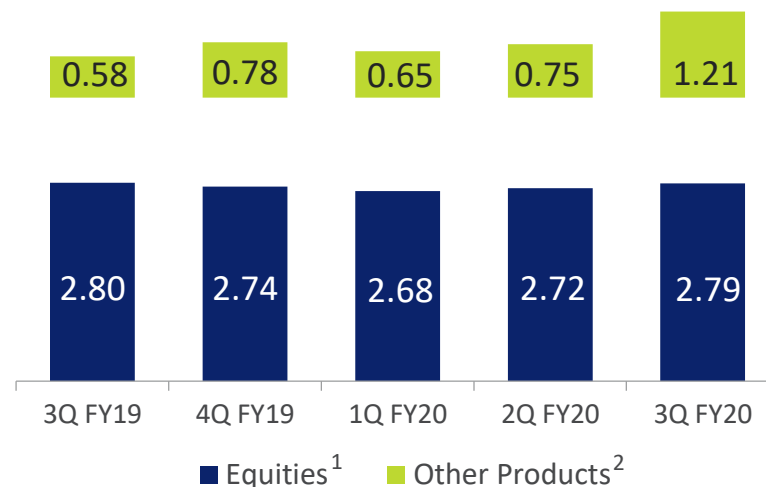
Securities Total Value Traded (\$B)

Total Traded Value	62.3	67.0	67.8	68.2	101.4



Average Clearing Fee by Products (bps)

Average yield	2.67	2.66	2.60	2.66	2.71



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

¹ Equities include ordinary shares, real-estate investment trusts and business trusts

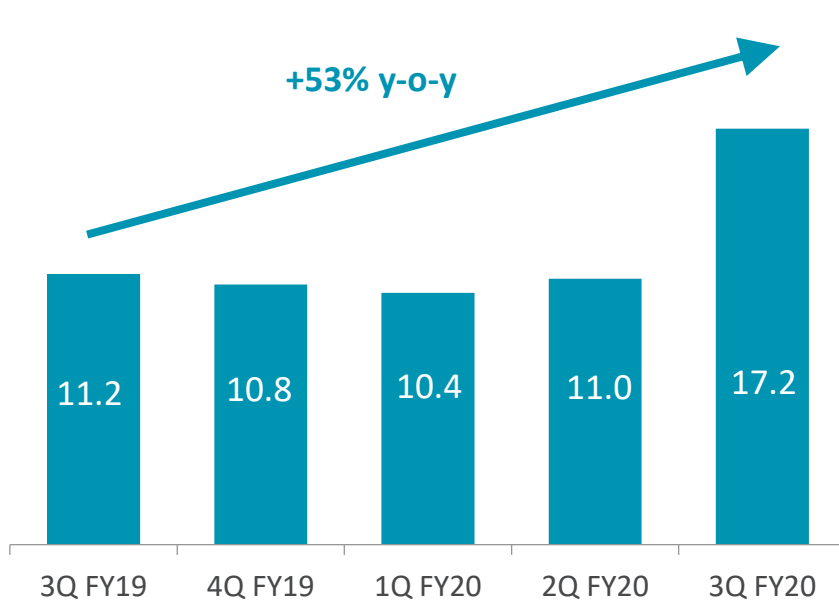
² Other products include structured warrants, exchange-traded funds, daily leverage certificates, debt securities, and American depository receipts

Data, Connectivity & Indices

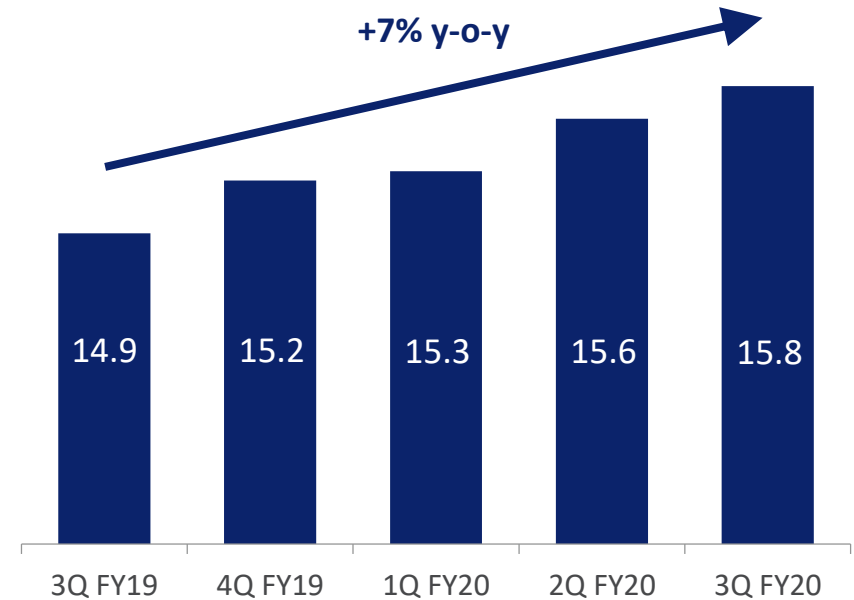
Data, Connectivity & Indices
\$33M ↑ 26% y-o-y

- Market data and Indices revenue up 53% to \$17M
- Revenue from Scientific Beta since February, of \$6M
- Connectivity revenue up 7% to \$16M from higher derivatives connectivity and continued growth of our colocation services business

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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