

DBS Vickers Pulse of Asia Conference 2021 Singapore Exchange Limited

January 2021

Singapore Exchange

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Who we are

SGX 📰

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

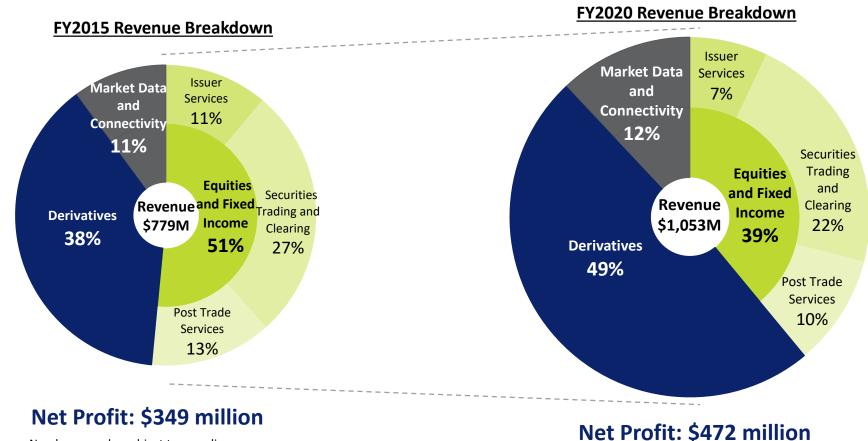
Key roles of our International offices

- 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.



Note: Numbers may be subject to rounding Source: SGX



Macro and investor trends shaping markets today





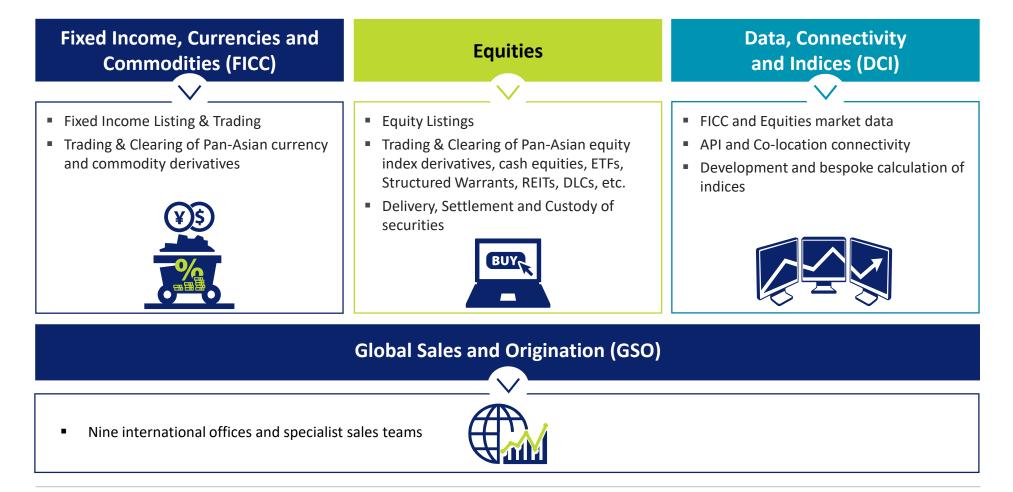
Executing our strategic priorities





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.





Our strengths as a multi-asset marketplace

Wide range of Asian portfolio risk management and access solutions

Liquid futures & options products in key asset classes such as equities, currencies and commodities Capital Efficiency through Margin-Offsets, creating customer stickiness

Cross-asset margin offsets resulting in savings of 30% to 90%

Round-the-clock trading covering Asian & Western time zones

Ability for global participants to manage their portfolio risk 22.5 hours a day

Trusted clearing house and high skin in the game

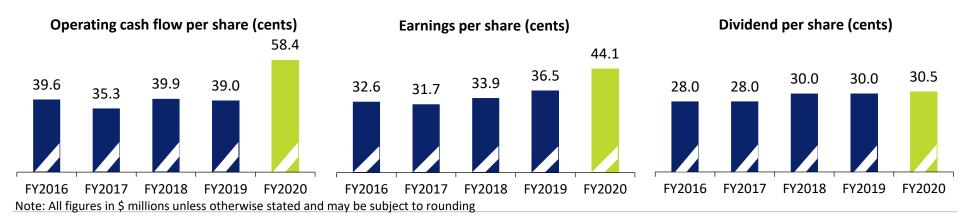
Committed to the safety of the market by contributing 25% to the clearing fund



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 ¹
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%

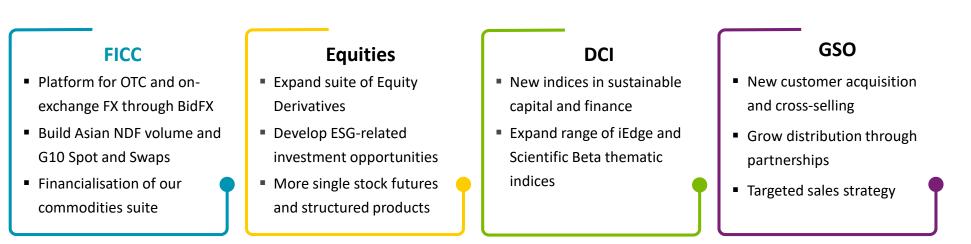




¹ Adoption of SFRS(I) 16 Leases: Rental expenses relating operating leases for data centers and office premises are now recorded as depreciation expense and finance charges.

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.



SGX **S**

Fixed Income, Currencies and Commodities (FICC)



A leading Fixed Income listing venue

Size of Market

- Asia (ex-Japan) bond market of US\$14 trillion
- Shift towards electronic trading
- Fixed Regulatory trends favour Income shift to on-exchange clearing

Singapore

 Strong distribution network to global investor base with US\$3.4 trillion of AUM in Singapore SGX

ARG

- >US\$2.2T amount issued, with more than 6,600 listed bonds from over 66 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 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

- Largest financial market globally with US\$6.6 trillion traded OTC daily
- Asian NDFs is a US\$153 billion market that has potential to be futurised
- Regulatory trends favour shift to on-exchange clearing

Singapore

- Largest FX center in Asia Pacific, third largest globally
- US\$640 billion traded OTC daily
- Leading global trading venue for key Asian currencies

SGX



- Diverse Asian currency suite of 23 currency futures and options contracts
- >80% market share in USD/CNH and > 60% market share in INR/USD
- Notional on-exchange FX ADV of US\$5.9B in FY20
- Innovative FlexC FX futures feature

Key SGX Highlights

23 Futures O

Diverse Asian

FX suite

Options

Currencies

133%

% US\$10.36Bn ~US\$1.3T

Total Volume – CAGR Nov 13 – Nov 20 Open Interest value (Nov 2020) Notional value traded in 2019 up 44% y-o-y



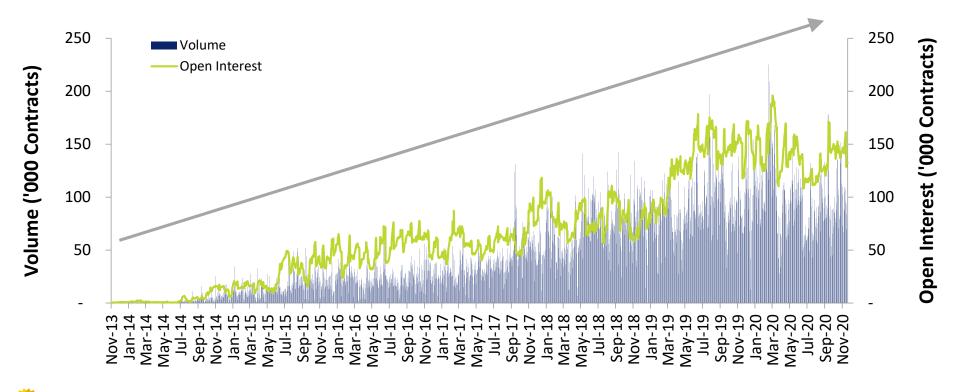
Expanding Network

SGX 🛤

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)

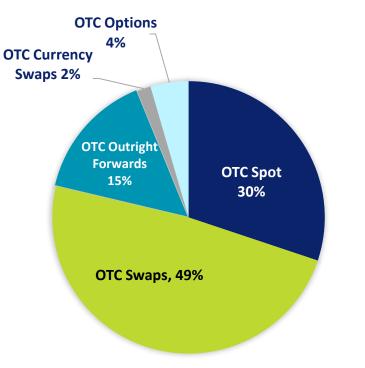
Note: Data as at 30 November 2020



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

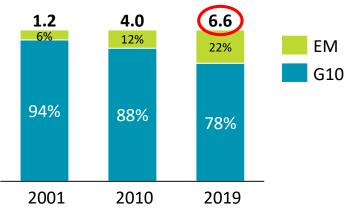
<u>Global OTC FX Trading in 2019 – by instrument type</u>



Synergistic opportunities from BidFx's strengths:

- Asian NDF
- G10 Spot & Swaps
- International footprint

OTC FX: Increasing growth of EM currencies¹ US\$ Trillion ADV, 2001-2019



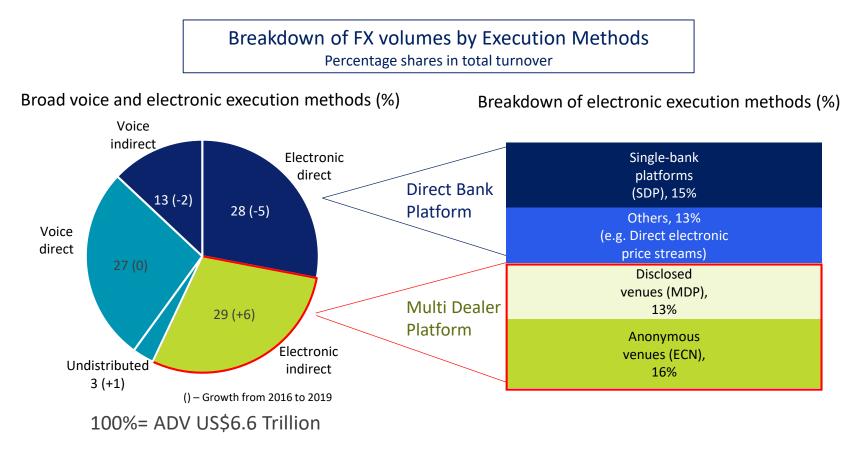
Source: BIS Triennial Central Bank Survey 2019 and SGX estimates



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 electronification of FX market

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



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

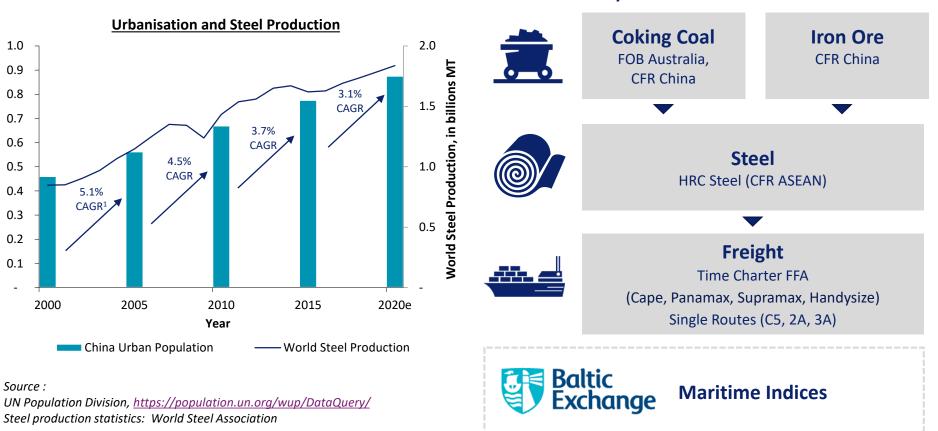
MDP: Multi-Dealer Platform, electronic venue (usually 3rd party) for clients to access liquidity from many banks

ECN: "Electronic Communication Network" that automatically matches buy and sell orders on a 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



Price-Discovery Centre For The Steel Value Chain

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



2000

1.0

0.9

0.8

0.7

0.6

0.5

0.4

0.3

0.2

0.1

Source :

5.1% CAGR¹

Urban Population, in Billions

The leading offshore Iron Ore risk management hub

Size of Market

- Largest in the metal market by tonnage
- Notional value of >US\$115B traded annually in the
- Iron physical market
 Ore Asia's first truly global commodity, with China a major consumer
 - Increasing financialisation of Iron Ore

Singapore

- Leading merchant hub for commodities houses with ~140 metals and mineral companies
- Include top iron producers e.g. Vale, Rio Tinto, BHP Billiton

SGX

- ARE
- 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

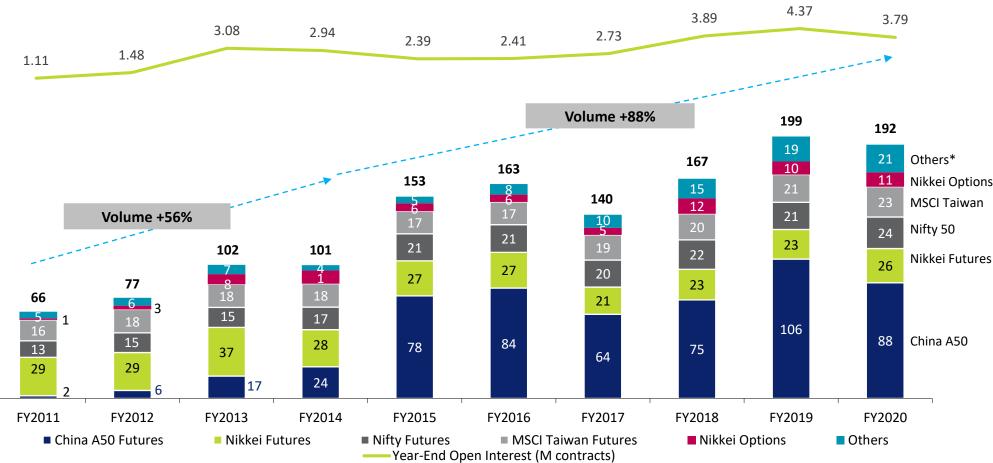


Equities (Derivatives and Cash)



Rapidly growing offshore market for Asian Equity Derivatives

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

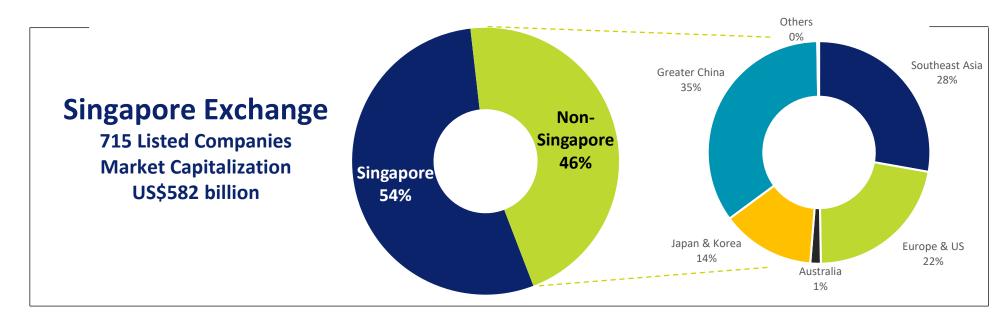






SGX is the Most International Exchange

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



Australia Securities Hong Kong Stock Exchange London Stock Exchange NASDAQ New York Stock Exchange Tokyo Stock Exchange Exchange Non-Non-Non-UK Non-US Non-AU Japan US Non-16% 15% 6.7% 0.1% 15% China 7.2% AU China* US UK US Japan 93.3% 92.8% 85% 84% 85% 99.9%

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



Top Sectors on SGX

Consumer

PF: 16x



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

Maritime, Offshore Services & Energy

PF: 15x

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



- 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

Includes Agri-commodities, Mineral &

34 companies with market cap of

Commodities

Oil & Gas Companies

US\$28 billion

PE: 15x

\mathbb{D}

Healthcare

PF: 22x*



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

Bloomberg & Singapore Exchange (June 2020) Source:

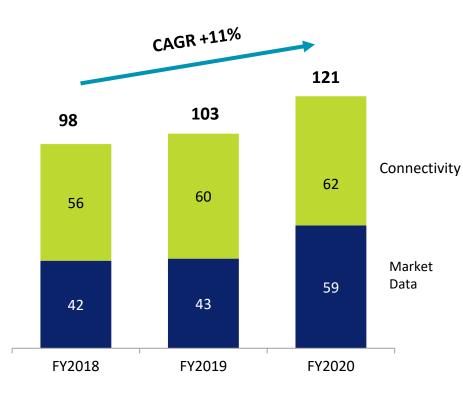
^ Excludes the PE of telecommunication services companies by GICS sub-industry classification *Excludes P/E of Thomson Medical with P/E of 2,231x Companies with PE >100 excluded from the PE calculations for all sectors.

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



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 2020¹, and there is further room for growth.



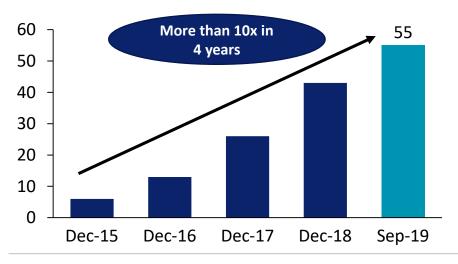


Scientific Beta broadens SGX's index offering through the fast-growing 'Smart Beta' index space



- 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







Strategically elevates SGX's Index business

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



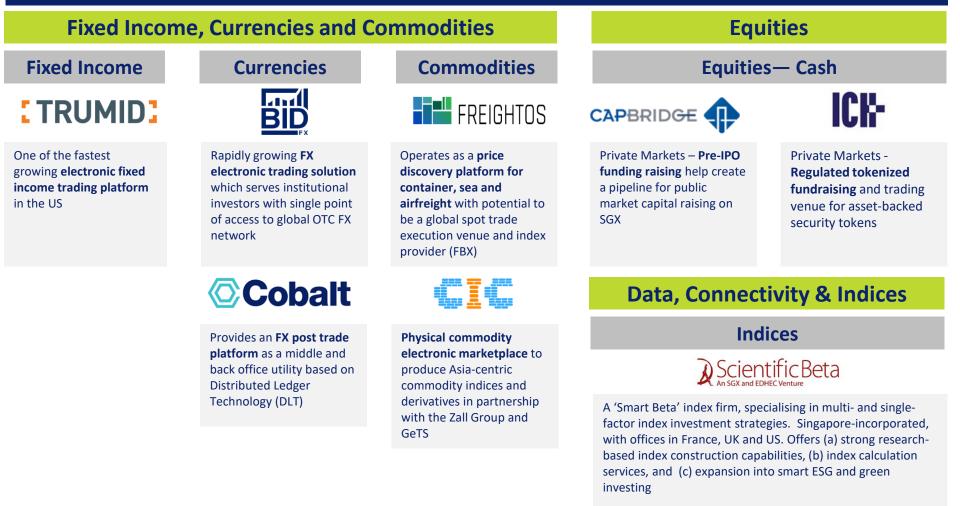


Other Information



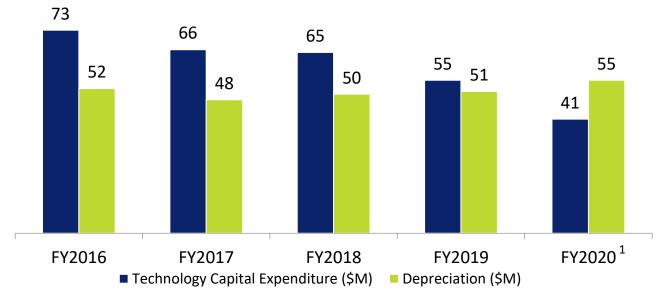
Delivering growth with bolt-on investments

Supporting SGX's multi-asset strategy



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



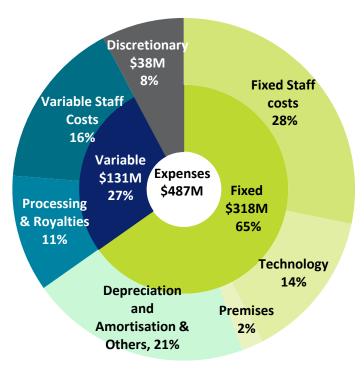
Technology – CAPEX and Depreciation (S\$ Million)

Note: All figures in \$ millions unless otherwise stated and may be subject to rounding ¹FY2020 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

Our Focus

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



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.

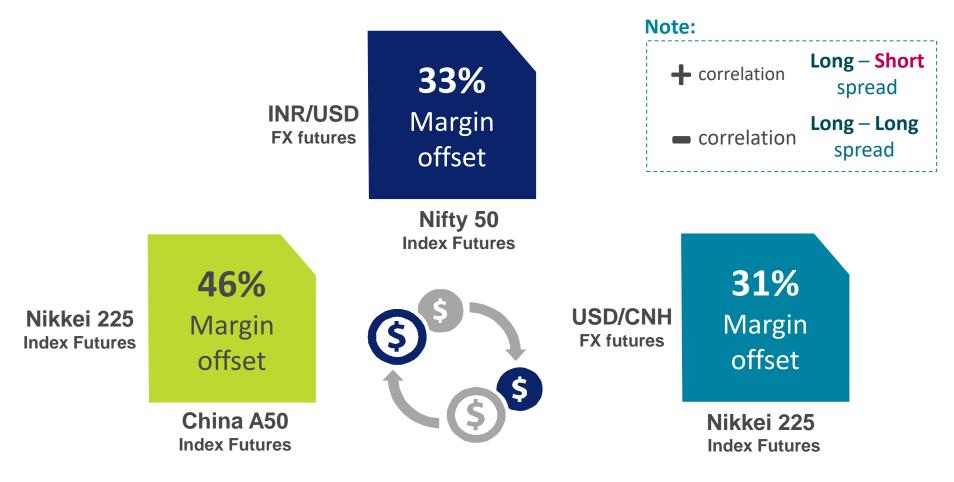


Awarded Asia's Best Sustainability Report (within Annual Report) in 2020 Ranked within the top 5 among listed companies in the NUS Governance and Transparency Index* in the last 5 years.



Cross margining efficiencies

Correlated products, margin netting efficiencies





Cross margining example

More exposure with the same amount of margins

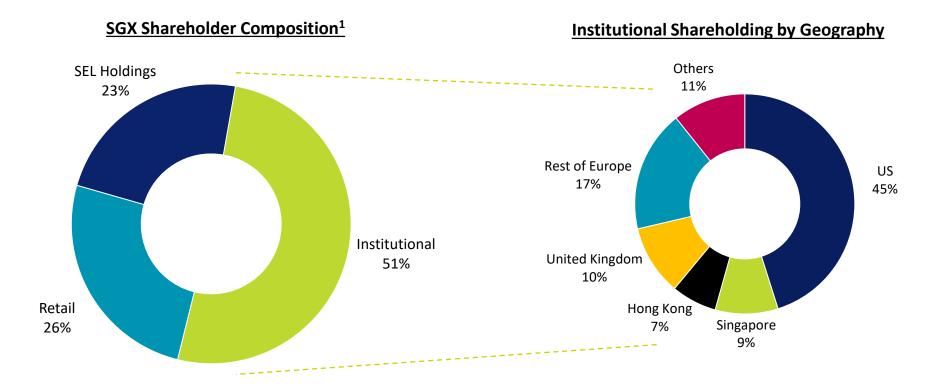


Note: Based on exchange rate as of 3 February 2020 Based on Margin Schedule as of 3 February 2020, full schedule available on SGX website

SGX =

SGX shareholders' profile

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

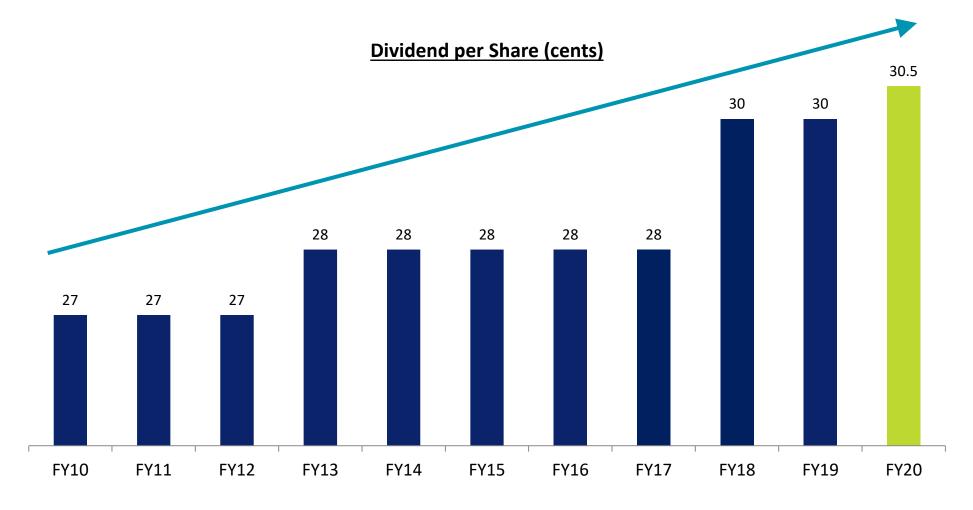


Note: Numbers may be subject to rounding. ¹As at 30 June 2020



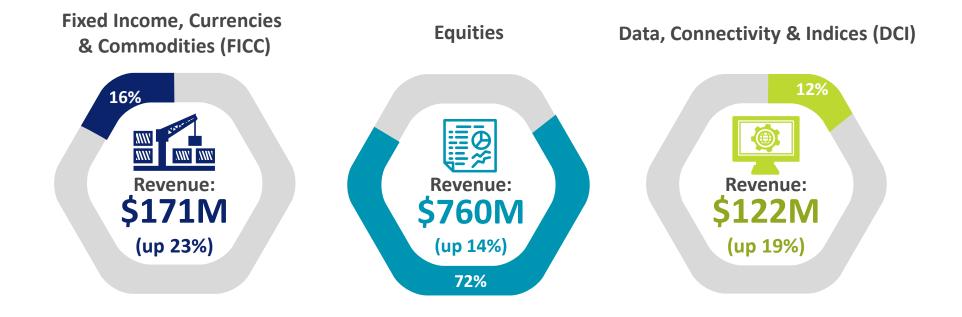
Dividend history

Committed to returning value to our shareholders





FY2020 Performance

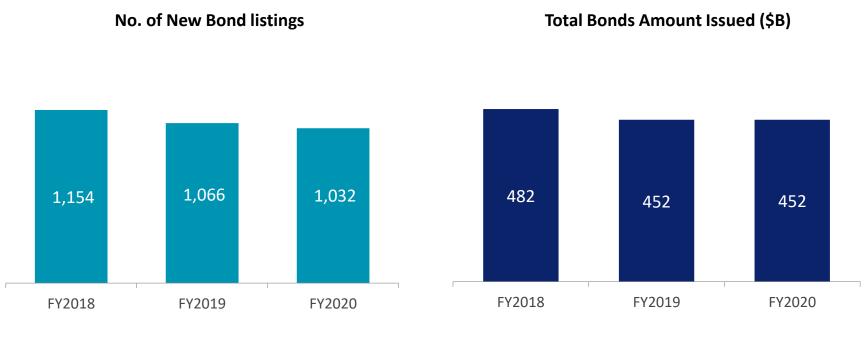


- Total revenue of >\$1.0 billion, highest since listing
- Achieved double-digit growth in all business segments under a new organisational structure
- Leveraged on our global network and partnerships to engage and acquire new customers



FICC – Fixed Income

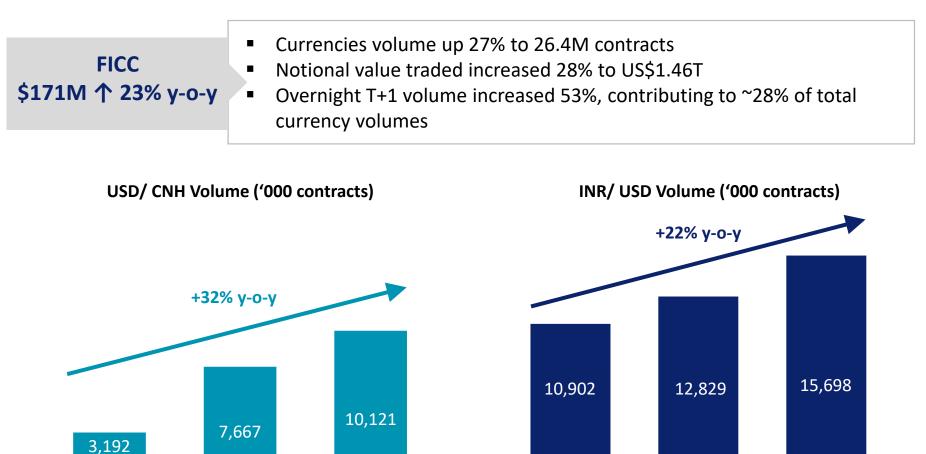
FICC \$171M 个 23% y-o-y	 Number of new bond listings at 1,032, down 3% Total bond amounts issued at \$452B, comparable Attracted more bond issuers from North America, Latam, and India
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Note: All figures in \$ millions unless otherwise stated and may be subject to rounding



FICC – Currencies



FY2018

FY2019

FY2020

SGX =

FY2018

FY2019

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

FY2020

FICC – Commodities

	FICC ► 23% y-o-	- y = E = F p	 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)			
	+25% y-o-y								
14,088	16,773	20,968	645	+7% y-o-y 969	1,033	1,689	1,923	1,819	
FY2018	FY2019	FY2020	FY2018	FY2019	FY2020	FY2018	FY2019	FY2020	

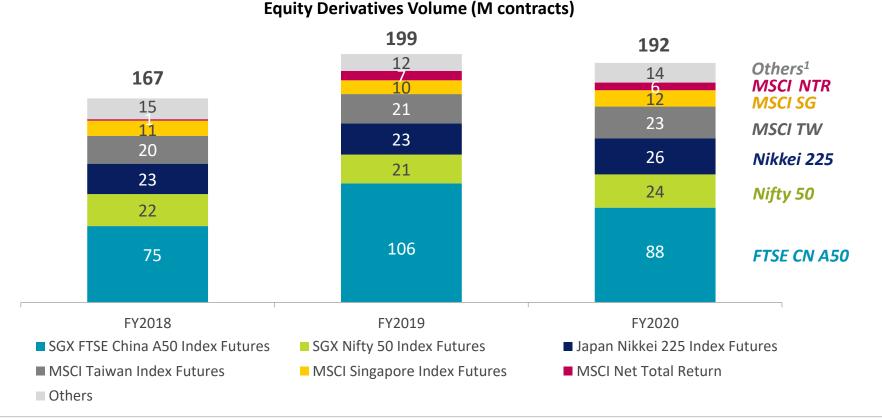
Note: All figures in \$ millions unless otherwise stated and may be subject to rounding



Equities – Equity Derivatives

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

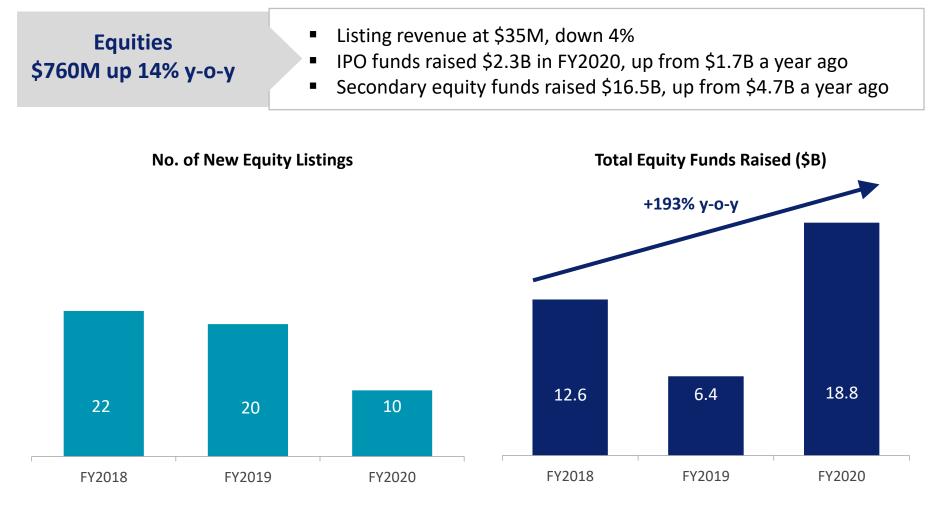
- Equity derivatives down 3% y-o-y. Higher volumes in MSCI SG, NK 225, Nifty 50, and MSCI Taiwan futures, offset by lower volumes in our FTSE China A50 futures.
- Overnight T+1 volumes increased >25%, contributing to ~17% of total equity derivatives volumes





Note: All figures in \$ millions unless otherwise stated and may be subject to rounding ¹Others comprise mainly Nikkei 225 Index Options and Single Stock Futures

Equities – Cash Equities Listings



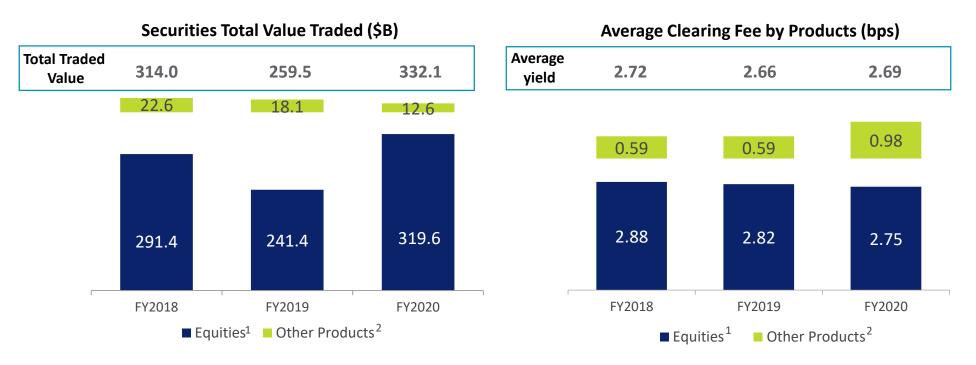
Note: All figures in \$ millions unless otherwise stated and may be subject to rounding



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



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

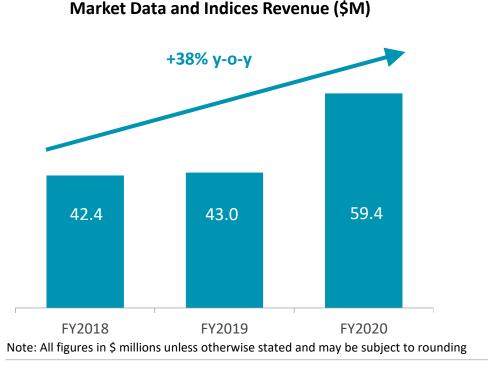
²Other products include structured warrants, exchange-traded funds, daily leverage certificates, debt securities, and American depository receipts

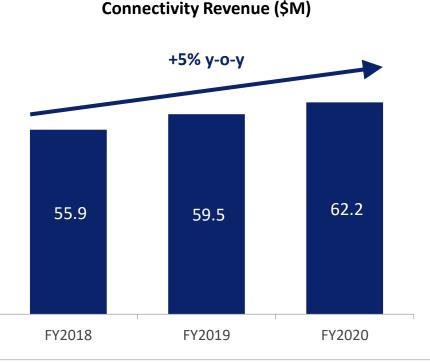


Data, Connectivity & Indices

Data, Connectivity & Indices \$122M 个 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









Thank You

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