

JP Morgan ASEAN Financials Forum

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8 January 2020

Singapore Exchange

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Contents

 Who we are Our background International footprint Trends and strategy, organisational structure Capital management, key financials Outlook 	2
Fixed Income, Currencies & Commodities	14
Equities (Derivatives and Cash)	22
Data, Connectivity and Indices	28
1Q FY2020 Performance	31
Others	40



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





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

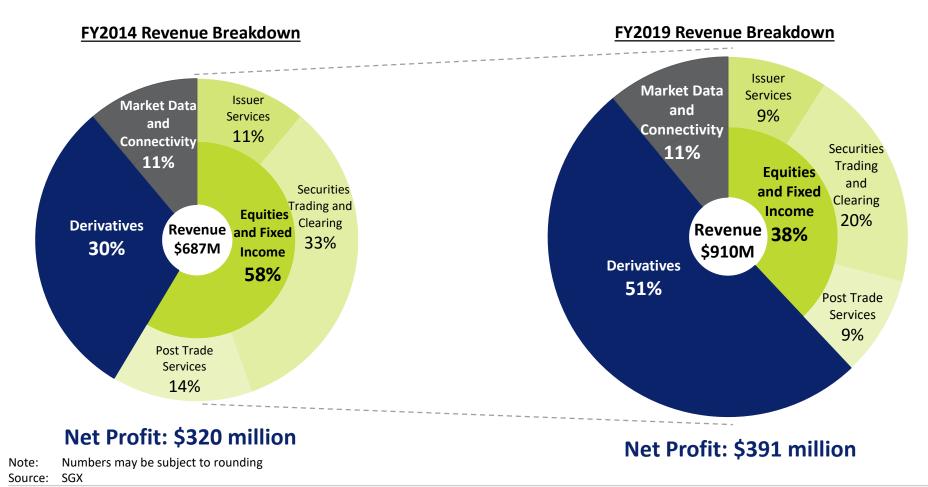
Key roles of our International offices

- 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.

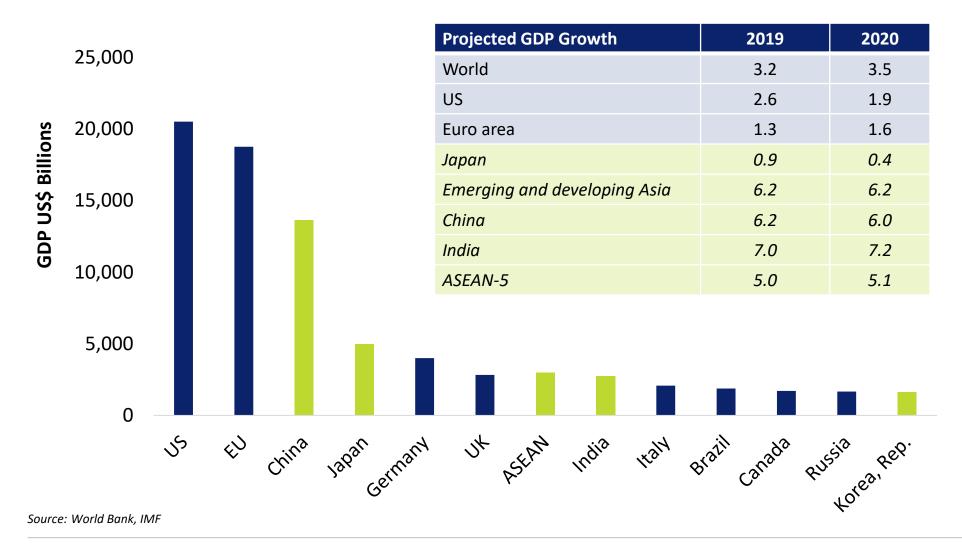


Macro and investor trends shaping markets today





Investors seek access to Asia





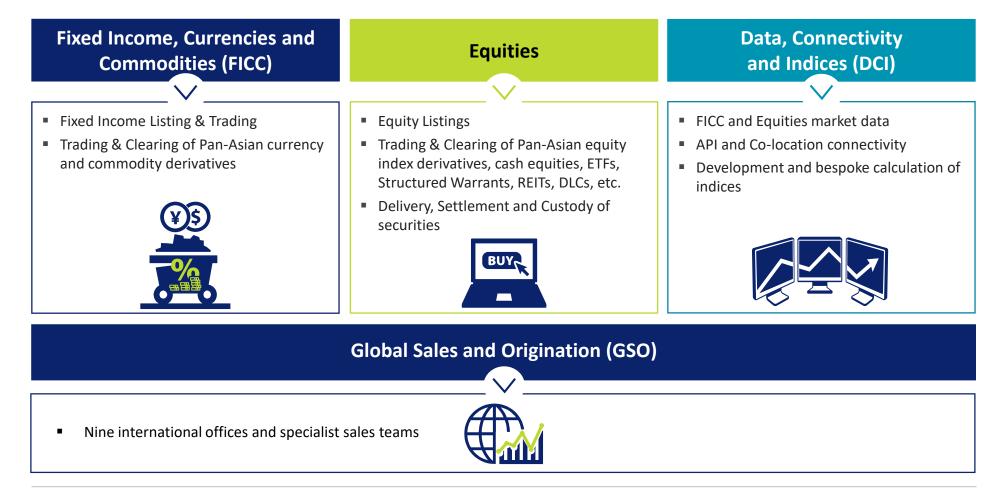
Executing our strategic priorities





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.





Capital management for growth

Dividend Policy



- Our policy: SGX aims to pay a sustainable and growing dividend over time, consistent with long-term growth prospects. Dividends will be paid on a quarterly basis and will be decided by the Board
- The policy provides flexibility to balance dividend payments with the need to retain earnings to support growth

Debt-free Balance Sheet



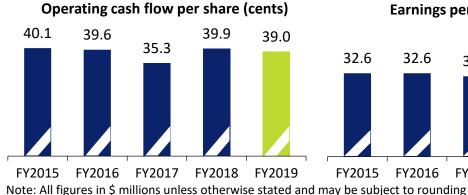
- Unlevered balance sheet provides borrowing capacity
- Uncommitted cash available



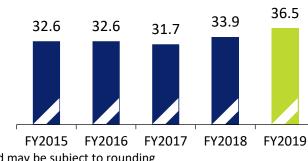
Robust financials

- 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

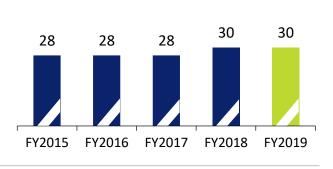
	FY2015	FY2016	FY2017	FY2018	Y-o-Y Change	FY2019
Revenue (\$ million)	779	818	801	845	+8%	910
EBITDA (\$ million)	459	469	460	486	+8%	524 ¹
EBITDA margin	59%	57%	57%	58%	-	58%
Operating profit (\$ million)	402	409	402	425	+9%	461
Operating profit margin	52%	50%	50%	50%	+2%	51%
Net profit (\$ million)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



Earnings per share (cents)



Dividend per share (cents)





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.

Looking ahead... positioning for growth and scale

S

 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

- 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\$2.4 trillion of AUM in Singapore SGX

ARG

- >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 as at Jun 19 SGX Bond Pro gaining traction

TRUMID:

Expanding network



Largest and fastest growing FX futures exchange in Asia

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 FX center in Asia Pacific, third largest globally
- Leading global trading venue for key Asian currencies

SGX

- 21 futures and options currency contracts
- >70% market share in USD/CNH and > 40% market share in INR/USD
- FlexC FX futures launched in August 2018
- Investment in BidFX

Key SGX Highlights

19 Options **Futures**

Diverse Asian

FX suite

7

FX

~200%

Total Volume – CAGR Nov 13 – Jun 19

>US\$8Bn

Open Interest value (Jun 2019)

Notional value traded in FY2019 up 73% y-o-y

~US\$1T

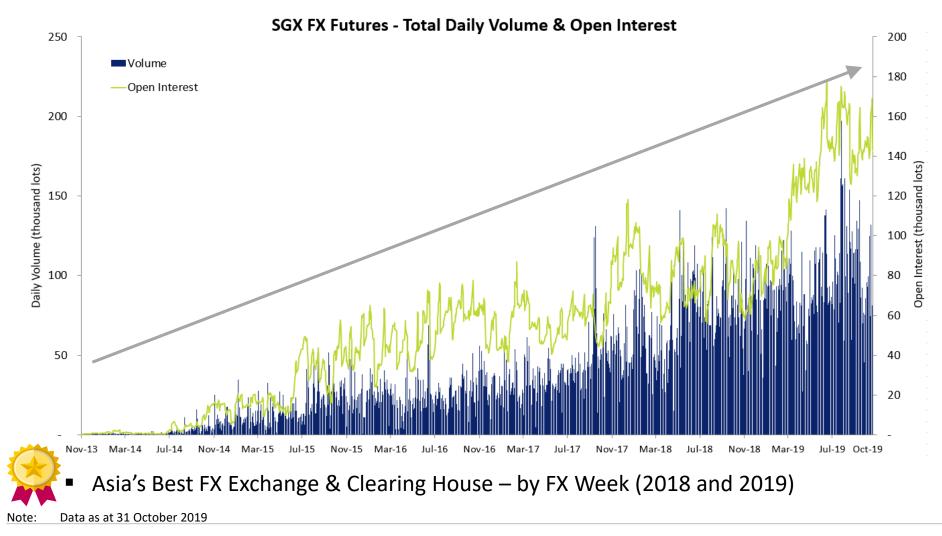


Expanding Network



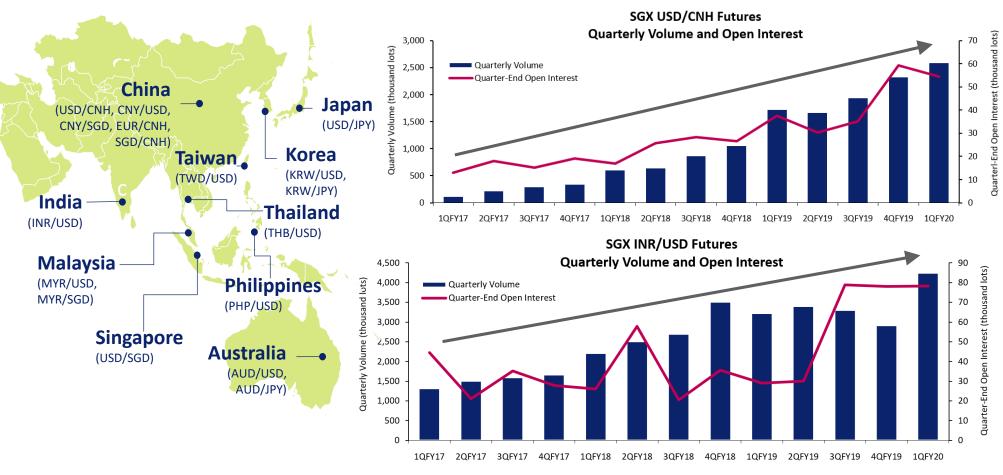
FX Futures as a growth driver

~200% volume CAGR since November 2013



Broad suite of Asian FX futures offering

21 Futures and Options Currency Contracts





Innovative FlexC FX futures

Bridging OTC and listed FX markets



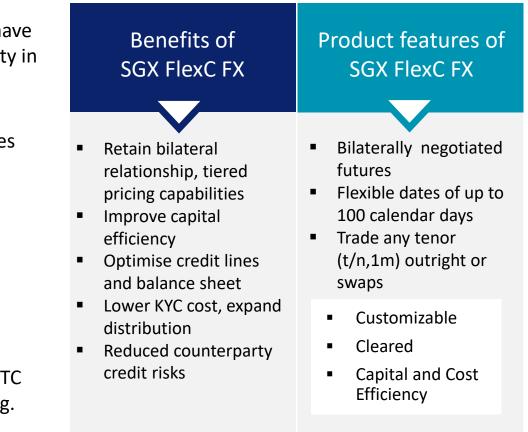
Global regulatory changes after GFC have led to increased friction and complexity in today's FX trading environment

- Leverage Ratio
- Counterparty Credit Risk charges
- Liquidity Coverage Ratio
- Uncleared Margin Rules

 ∇



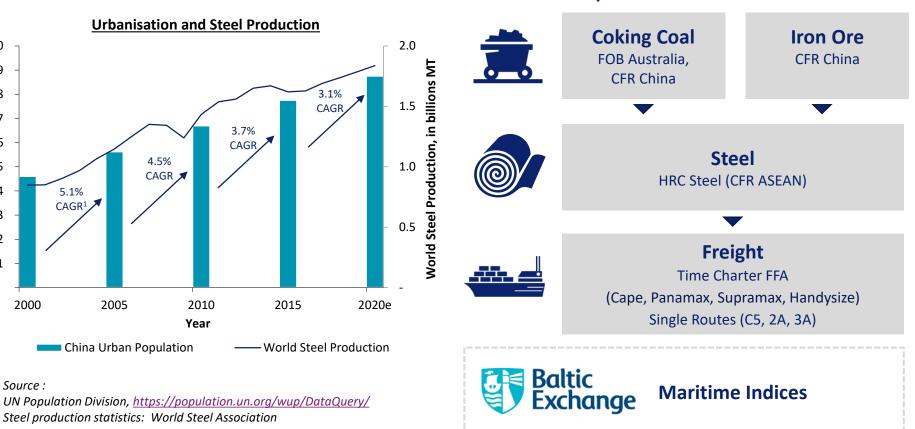
As a result, the FX market is moving towards Central Clearing. SGX FlexC Futures amplifies the benefits of clearing. It has flexibility features of OTC FX and the surety of Exchange Clearing.





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

Source :

1.0

0.9

0.8

0.7

0.6

0.5

0.4

0.3

0.2

0.1

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
- physical market Asia's first truly global Ore 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



- Global pricing and risk management centre
- Cleared 1.3 billion MT of iron ore in 2018
- Offers a complete iron ore suite: 58% Fe, 62% Fe, 65% Fe and Lump Premium
- Steel value chain incorporating coking coal and freight

Key SGX Highlights

1.3 billion MT

cleared in CY2018

> 95%

market share of international iron ore volumes cleared

Fe 65%

futures contract launched in Dec 2018 **1.5**x

of paper to physical ratio

Potential to grow

Iron

Equities (Derivatives and Cash)



Our strengths as a multi-asset marketplace

Wide range of risk management and access solutions

Liquid futures & options products in major asset classes such as equities, FX and commodities

Capital Efficiency through Margin-Offsets

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 hours a day

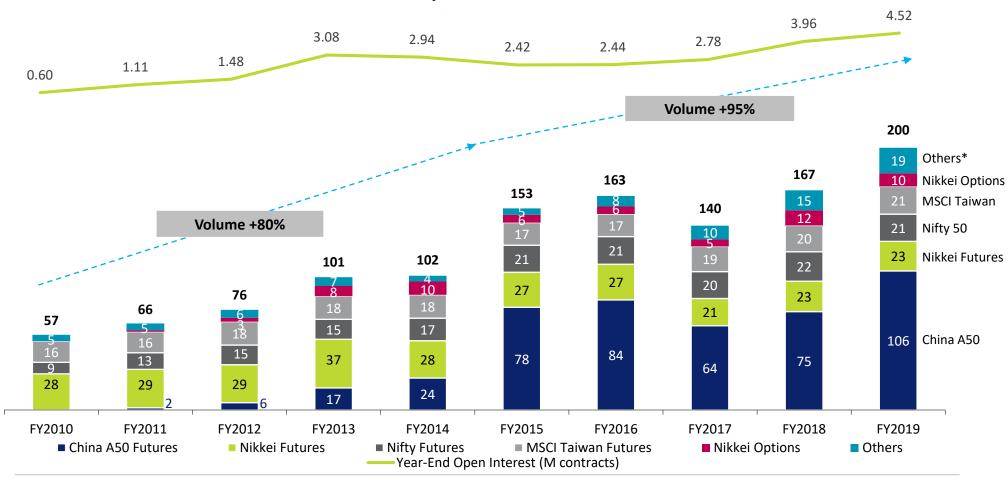
Trusted clearing house and high skin in the game

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



Rapidly growing offshore market for Asian Equity Derivatives

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

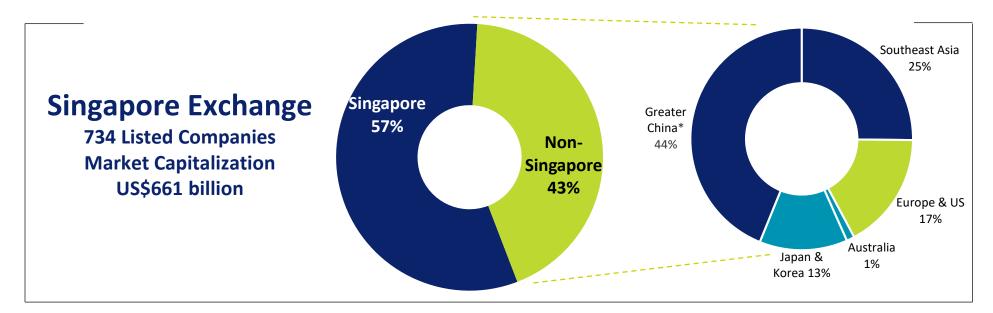


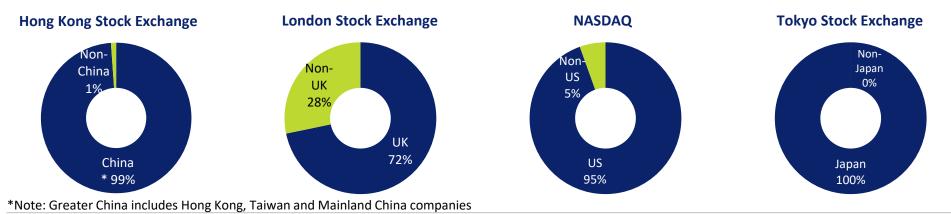




The world's most international exchange

Around 45% of total market cap of companies listed on SGX are overseas companies







Our key sectors*

Consumer

PE: 18x



- Includes food & beverage, retail and others
- 141 companies with market cap of US\$63 billion

Technology

PE: 19x^

- Includes technology hardware & equipment, digital, semiconductor and telecommunications services companies. Other businesses include media, clean tech and engineering.
- 84 companies with market cap of US\$61 billion

Healthcare

PE: 47x[#]



- Full range of companies from pharmaceuticals, healthcare services to medical devices technology
- 37 companies with market cap of US\$48 billion

Real Estate

PB: 0.9x



- 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\$140 billion

Maritime, Offshore Services & Energy

PE: 14x

- Asia's largest cluster of listed companies
- 67 companies and 2 business trusts with market cap of US\$18 billion

Commodities

PE: 18x

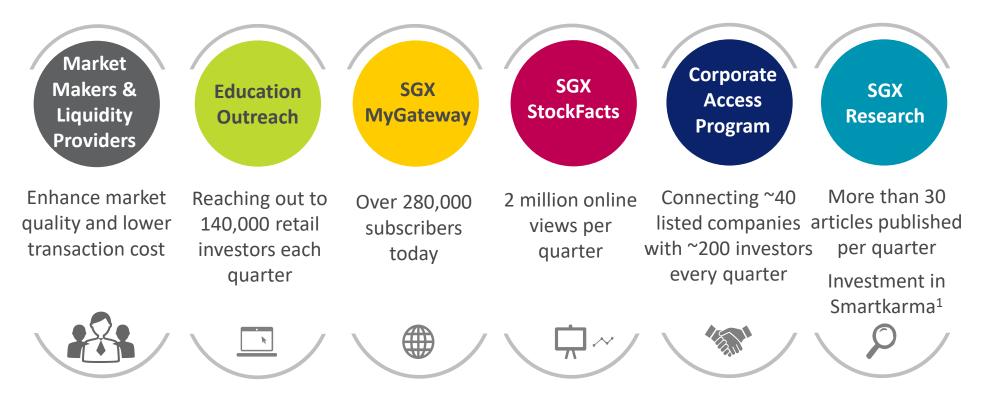
- Includes Agri-commodities, Mineral & Oil & Gas Companies
- 31 companies with market cap of US\$28 billion



^ Excludes the PE of telecommunication services companies by GICS sub-industry classification
 # Includes P/E of IHH Healthcare BHD and Thomson Medical with P/E of 85.55x and 85.56x respectively
 * Companies with PE >100 excluded from the PE calculations for all sectors.
 Bloomberg & Singapore Exchange (Sep 2019)

Building liquidity and profiling our listed companies

Continuing our efforts in increasing trading activity



¹ Smartkarma is a Singapore-based fintech which operates a global investment research network that brings together institutional investors, independent investment analysts and listed companies on a single online platform where they share information and interact.

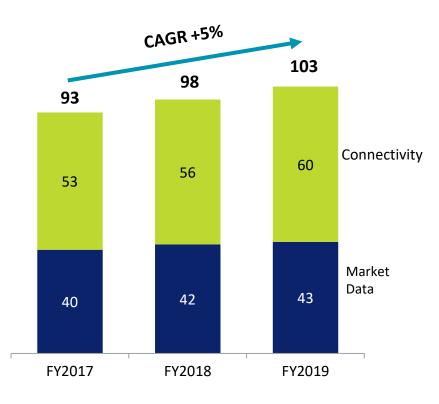


Data, Connectivity and Indices (DCI)



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



SGX Index Edge

- Index business established to take advantage of global shift to index-based investing
- Global Exchange Traded Products (index-based) have AUM of > US\$4tn
- Index funds (unlisted) has grown >230% to > US\$ 6tn since 2007

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

SGX Proprietary Indices

- Domestic Indices
 - SGX Thematic indices e.g. S-REIT 20
 - SGX Sustainability index
- Regional Indices
 - SGX Developed Asia Quality Dividend Index
 - SGX APAC Dividend REIT

SGX Index Edge – Best Index Provider at Structured Retail Products Asia-Pacific Awards (2018)

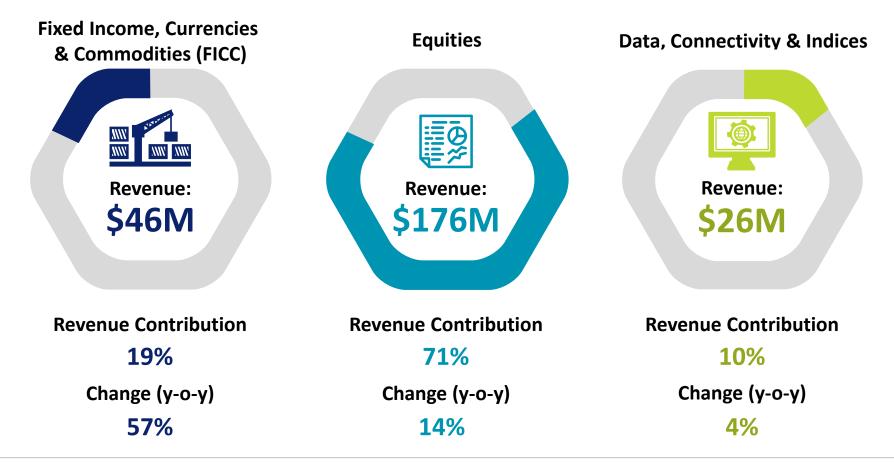


1Q FY2020 Performance



1Q FY2020 Performance

- Highest quarterly net profit in more than 10 years
- Growth in all business segments



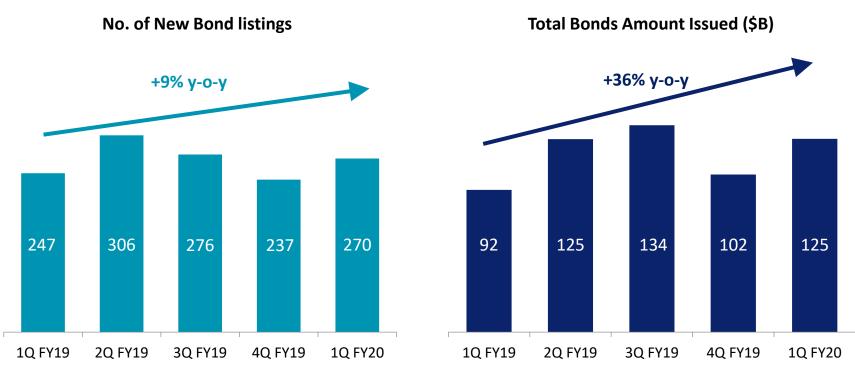
FICC – Fixed Income

Number of new bond listings at 270, up 9%

\$46M 个 57% y-o-y

FICC

- Total bond amounts issued at \$125B, up 36%
- Wide geographical spread of Fixed Income Issuers

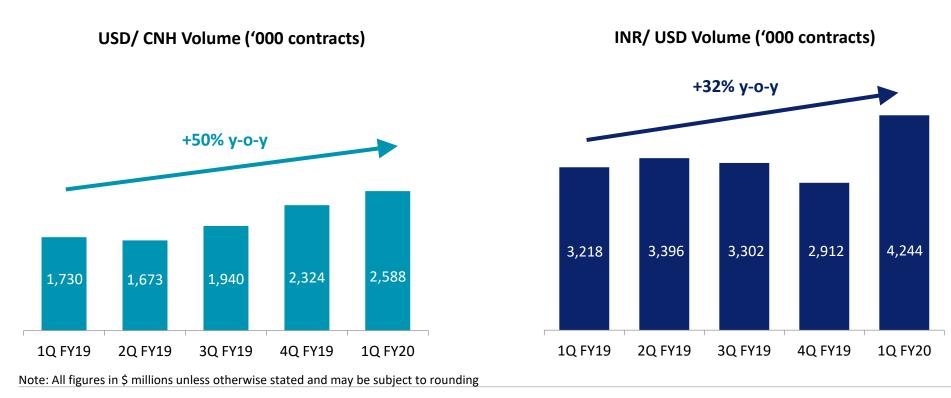


Note: All figures in \$ millions unless otherwise stated and may be subject to rounding



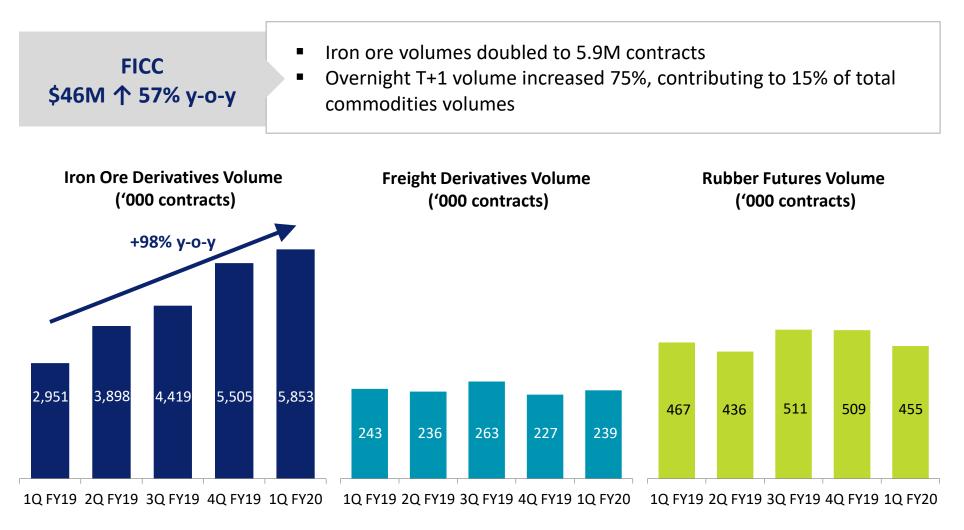
FICC – Currencies







FICC – Commodities



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

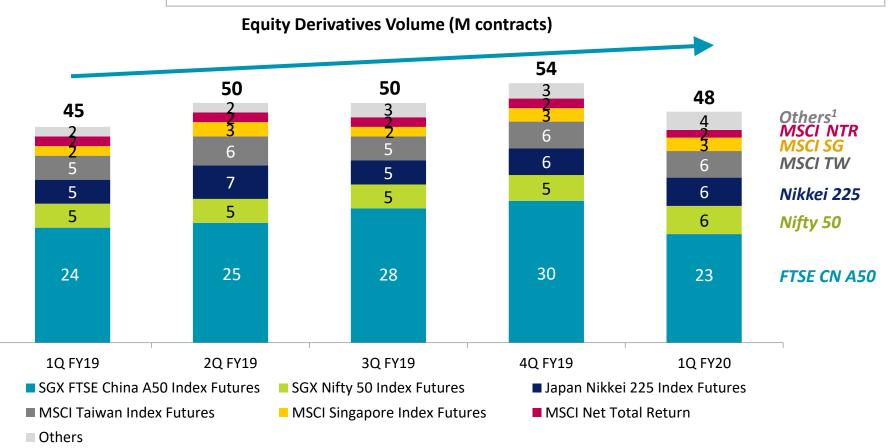


Equities – Equity Derivatives

Equities \$176M 个 14% y-o-y

- Higher trading volumes in key equity index contracts, up 6% y-o-y
- Growth in Nifty 50, Nikkei 225, and MSCI Singapore index futures contracts

 Overnight T+1 volume up 56%, contributing 16% of total equity derivatives volumes

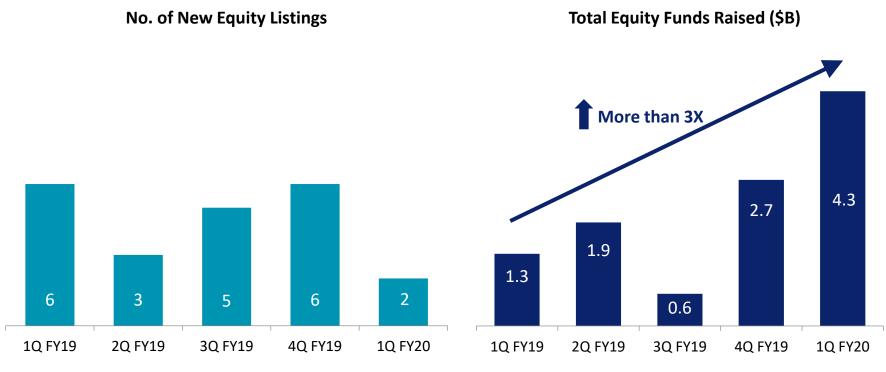




Note: All figures in \$ millions unless otherwise stated and may be subject to rounding ¹Others comprise mainly Nikkei 225 Index Options and Single Stock Futures

Equities – Cash Equities Listings

Equities \$176M 个 14% y-o-y	 Listing revenue at \$9M, comparable 2 new international equity listings Total funds raised increased 3X to \$4.3B



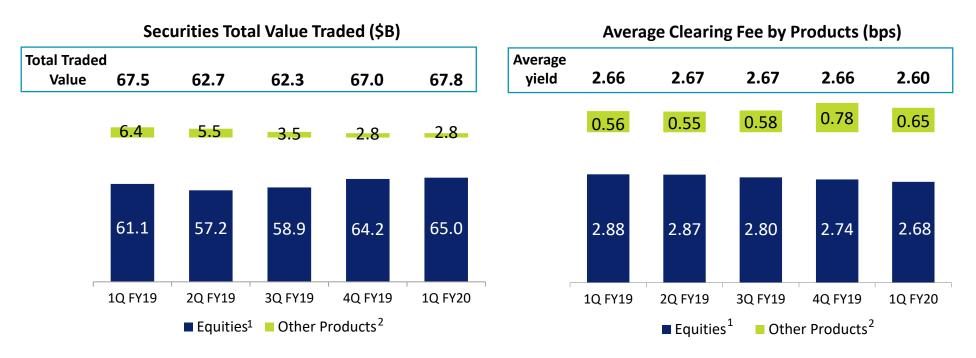
Note: All figures in \$ millions unless otherwise stated and may be subject to rounding



Equities – Cash Equities Trading & Clearing

Equities \$176M 个 14% y-o-y

- Total traded value comparable at \$67.8B
- Lower average clearing fee due to higher participation from market makers and liquidity providers



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

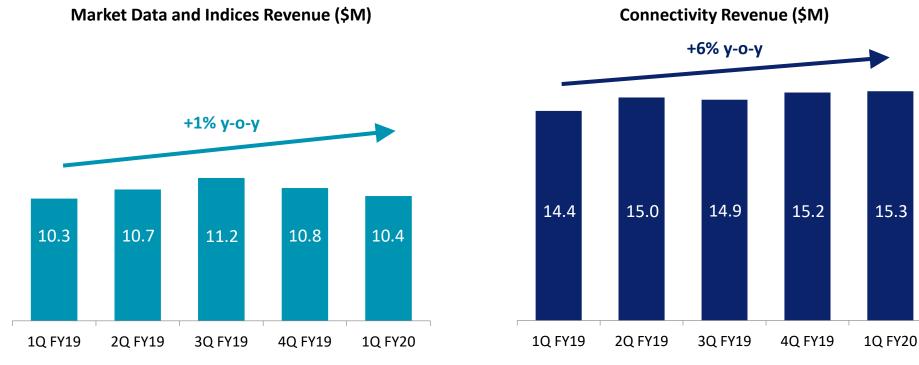
²Other products include structured warrants, exchange-traded funds, daily leverage certificates, debt securities, and American depository receipts



Data, Connectivity & Indices

Data, Connectivity & Indices \$26M 个 4% y-o-y

- Market data and Indices revenue comparable
- Connectivity revenue up 6% from higher derivatives connectivity subscriptions and continued growth of our colocation services business



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



Other Information



SGX share price and ST index since 1 July 2018

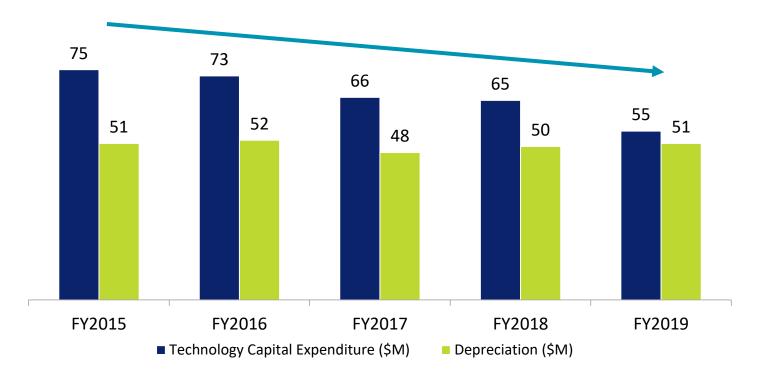
From 1 July 2018 to 31 October 2019, SGX share price increased 25%, outperforming STI which is down 1%. P/E at end of October at 23x.





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





Technology as a business enabler

Stability

Operational Excellence as a priority for Stakeholder Trust

- ☑ 100% Service Availability for all critical business services
- ☑ Regular benchmarking of cyber maturity using well established FFIEC Guidelines*
- ✓ State-of-the-art Enterprise Command Centre for round-the-clock monitoring of technology environment and swift response and recovery during incident management

Agility

API-enabled business platforms for seamless customer connectivity

Reach-ST, PTS, Titan DTDC - All platforms are API-based and have been modernized. SGX does not operate any legacy or obsolete technologies.

Differentiated in-house platforms to support multi-asset strategy and bespoke customer needs

- Derivatives Titan OTC, OTC Pro trade registration and broker workflow
- Fixed Income BondPro trade matching for Asian corporate bonds
- ☑ Indices Index calculation engine for custom indices

Opportunity

Digitalisation & Innovation

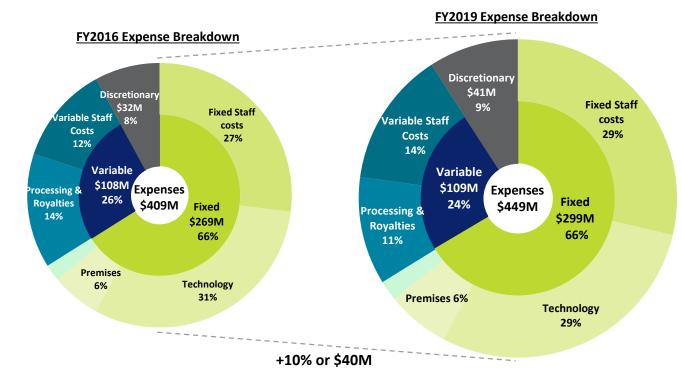
- Customer specific digital channels Investor Portal, Issuers Submission Portal, Members Submission Portal
- Emphasis on engineering innovation and emerging technologies like Machine learning, Blockchain, Cloud & Data.
- ☑ Filing of technology patent on distributed ledger for InterLedger DVP workflow
- ☑ Use of Cloud services in data platforms
- ☑ Data science and analytics for enhanced supervisory functions and user analytics



FFIEC - Federal Financial Institutions Examination Council (FFIEC) developed the Cybersecurity Assessment Tool for the assessment of cyber risk and benchmarking of cyber security maturity

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: \$465M to \$475M (increase of 3.6% to 5.8%)



- 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



Sustainability at SGX

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

- We advocate sustainable reporting by SGX-listed companies
- We seek to promote the sustainability of the financial system, as encapsulated by the World Federation of Exchanges (WFE) Sustainability Principles, and aligned with the UN Sustainability Development Goals
- We are a Partner Exchange of the United Nations Sustainable Stock Exchange Initiative (UNSSE)
- We are a member of the WFE sustainability working group
- We are a founding member of the Advisory Group for the Asia Sustainable Finance Initiative (ASFI), a multi-stakeholder forum based in Singapore that aims to create resilient economies

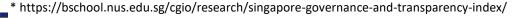
Sustainability factors that are important to SGX:

- **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, anticorruption and compliance policies
- 4. **People :** Our talent management and responsible employment practices
- 5. Environment : Our role in mitigating climate change





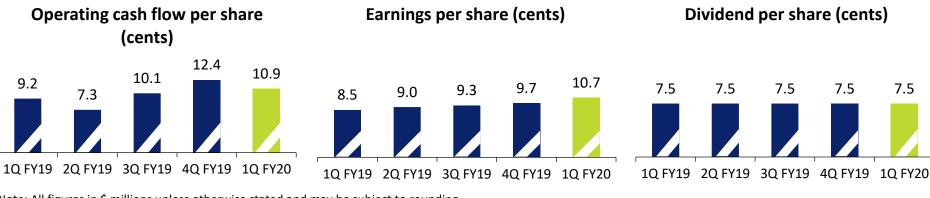
Ranked within the top 5 among listed companies in the NUS Governance and Transparency Index* in the last 5 years



Key Financial Indicators (Recent quarters)

- High operating profit and EBITDA margin of 54% and 63% respectively
- Quarterly dividend per share of 7.5 cents per share

	1Q FY2019	2Q FY2019	3Q FY2019	4Q FY2019	Q-o-Q Change	1Q FY2020
Revenue (\$ million)	209	224	229	248	-	248
EBITDA (\$ million)	122	129	134	139	+13%	156 ¹
EBITDA margin	58%	57%	59%	56%	+13%	63% ²
Operating profit (\$ million)	106	114	118	123	+10%	135
Operating profit margin	51%	51%	52%	50%	+8%	54%
Net profit (\$ million)	91	97	100	104	+10%	114
Return on equity	39%	39%	37%	36%	+11%	40%



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



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.

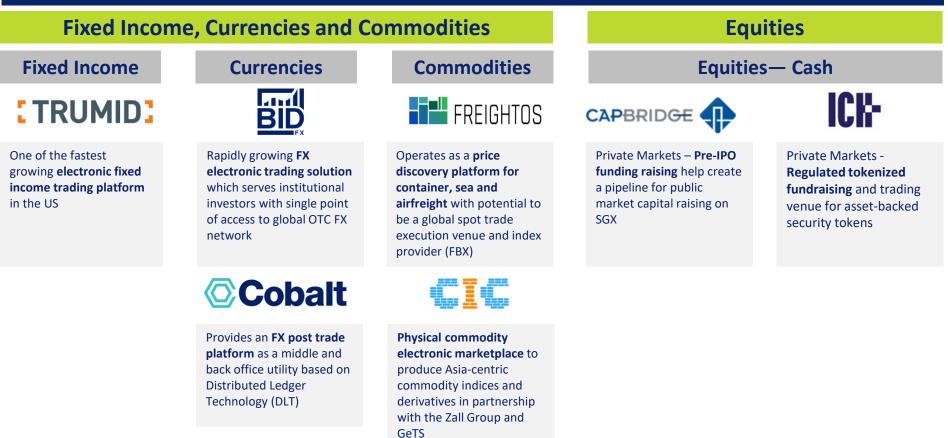
² Excluding the adoption of SFRS (I) 16 Leases, EBITDA margin would be 61%

Appendix



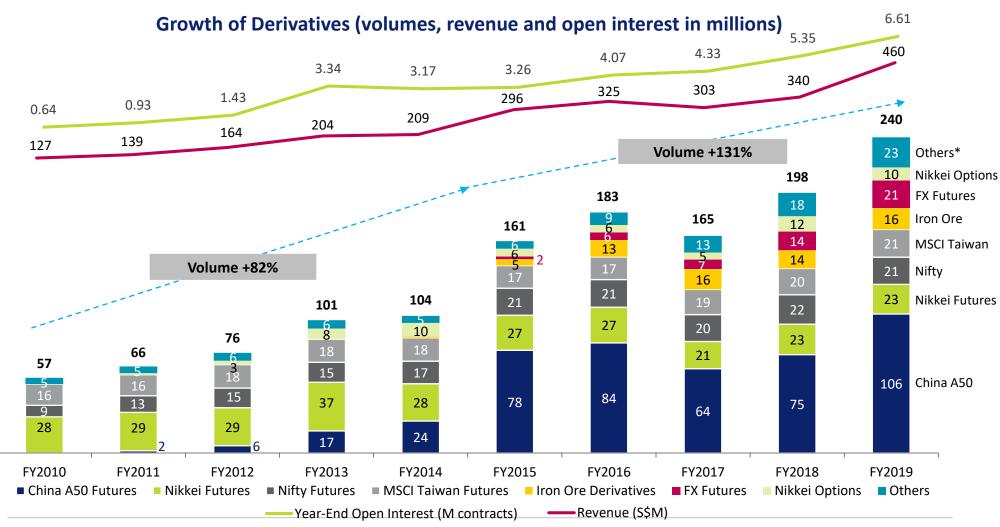
Delivering growth with bolt-on investments

Supporting SGX's multi-asset strategy



Rapidly growing offshore market for Asian Equity, Currencies and Commodities

Multi-asset exchange, covering a broad range of liquid Asian asset classes.





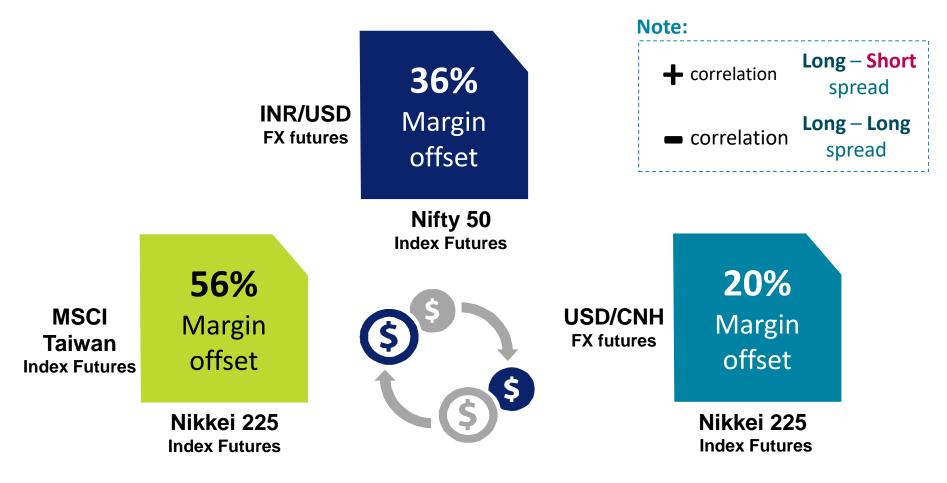
High operating margin business

Operating Income Margin Trends								
Segment	FY2017	FY2018	FY2019					
Equities and Fixed Income	56.0%	55.1%	44.9%					
Derivatives	39.7%	43.7%	54.5%					
Market Data and Connectivity	58.9%	53.3%	53.2%					



Cross margining efficiencies

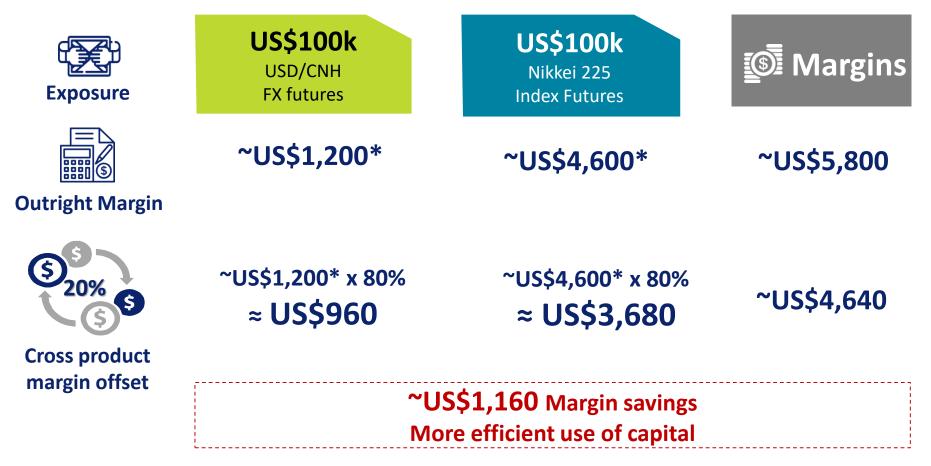
Correlated products, margin netting efficiencies





Cross margining example

More exposure with the same amount of margins

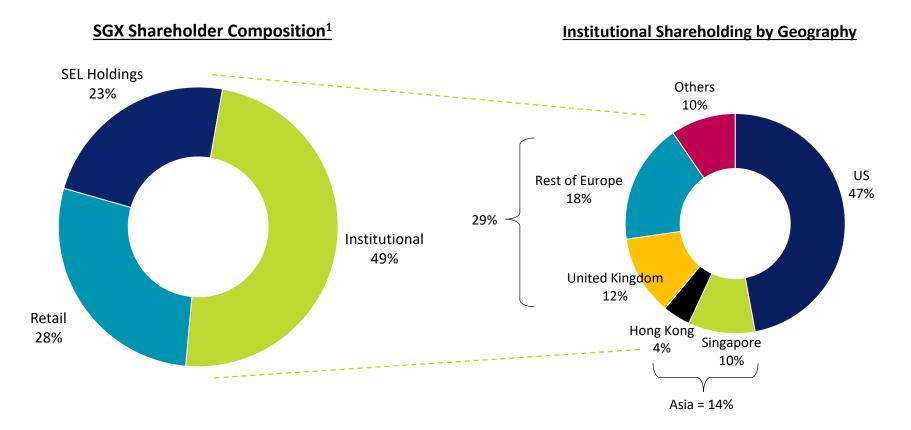


Note: Based on FX rate as of 3 June Based on Margin Schedule as of 3 June, full schedule available on SGX website



SGX shareholders' profile

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

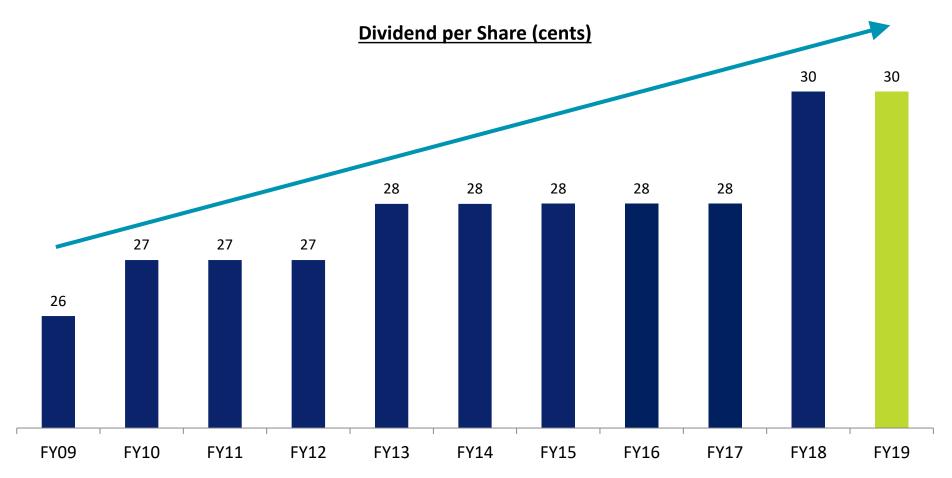


Note: Numbers may be subject to rounding. ¹As at 30 September 2019



10-Year dividend history

Committed to returning value to our shareholders







Thank You

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