



DIGITAL

TRANSFORMATION 2.0

I n v e s t o r D a y 2 0 2 3

Treasury & Markets

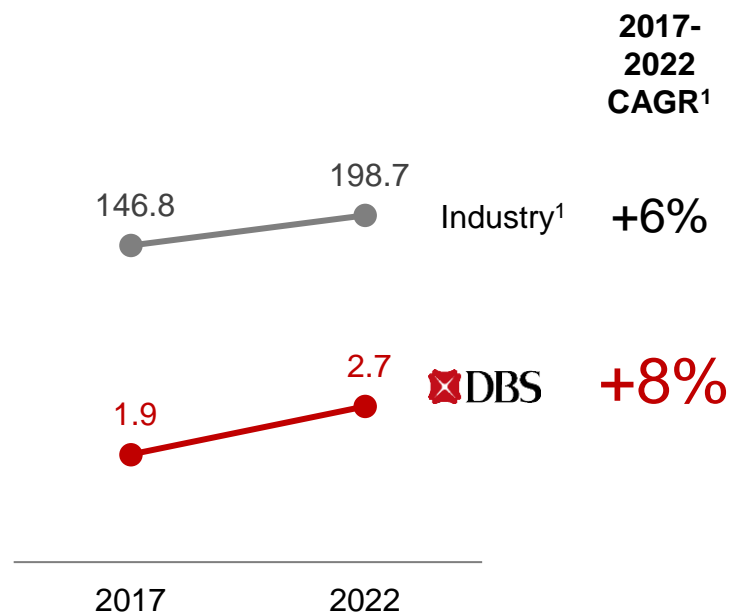
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Group Head, Treasury & Markets

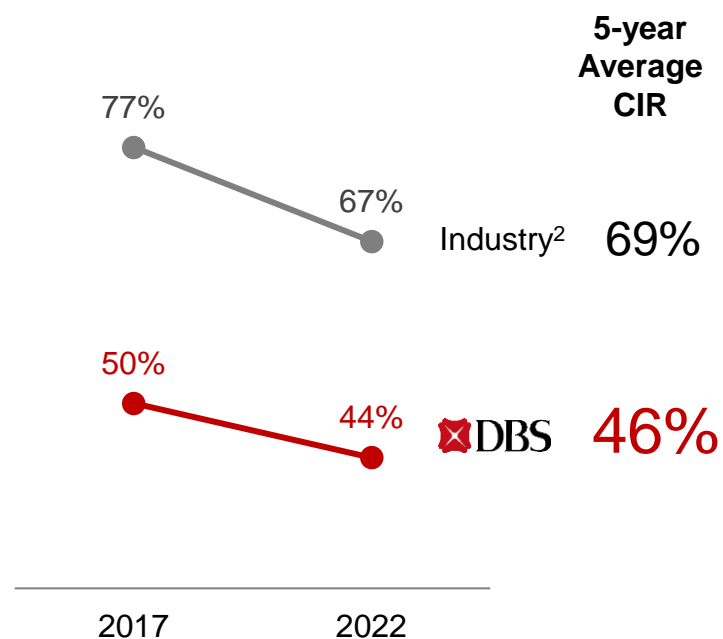
T&M is outperforming industry peers across income, cost-efficiency and ROE

- **+8% FICC and equity product revenue CAGR growth** between 2017 to 2022, vs. industry at 6%
- **Cost-to-income ratio and return on equity** outperforming industry benchmarks

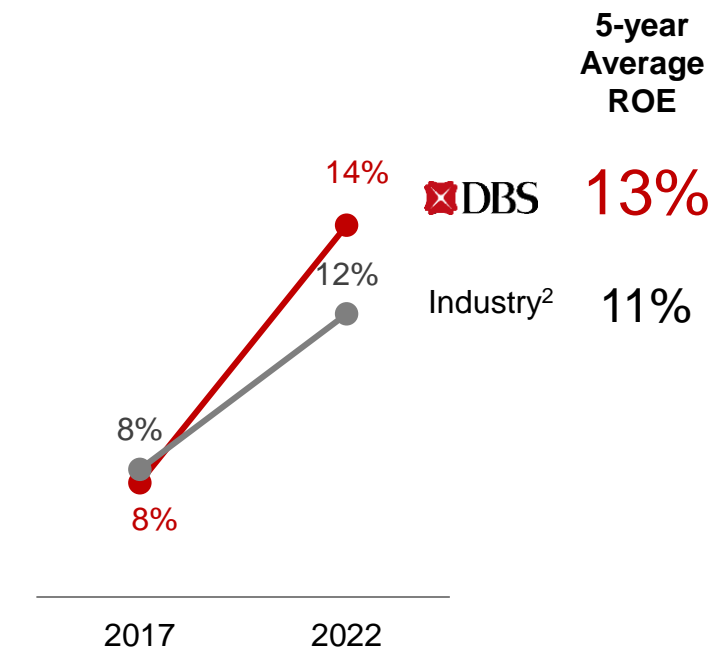
Revenue (FICC + EQ) (\$b)



Cost-to-Income (CIR)

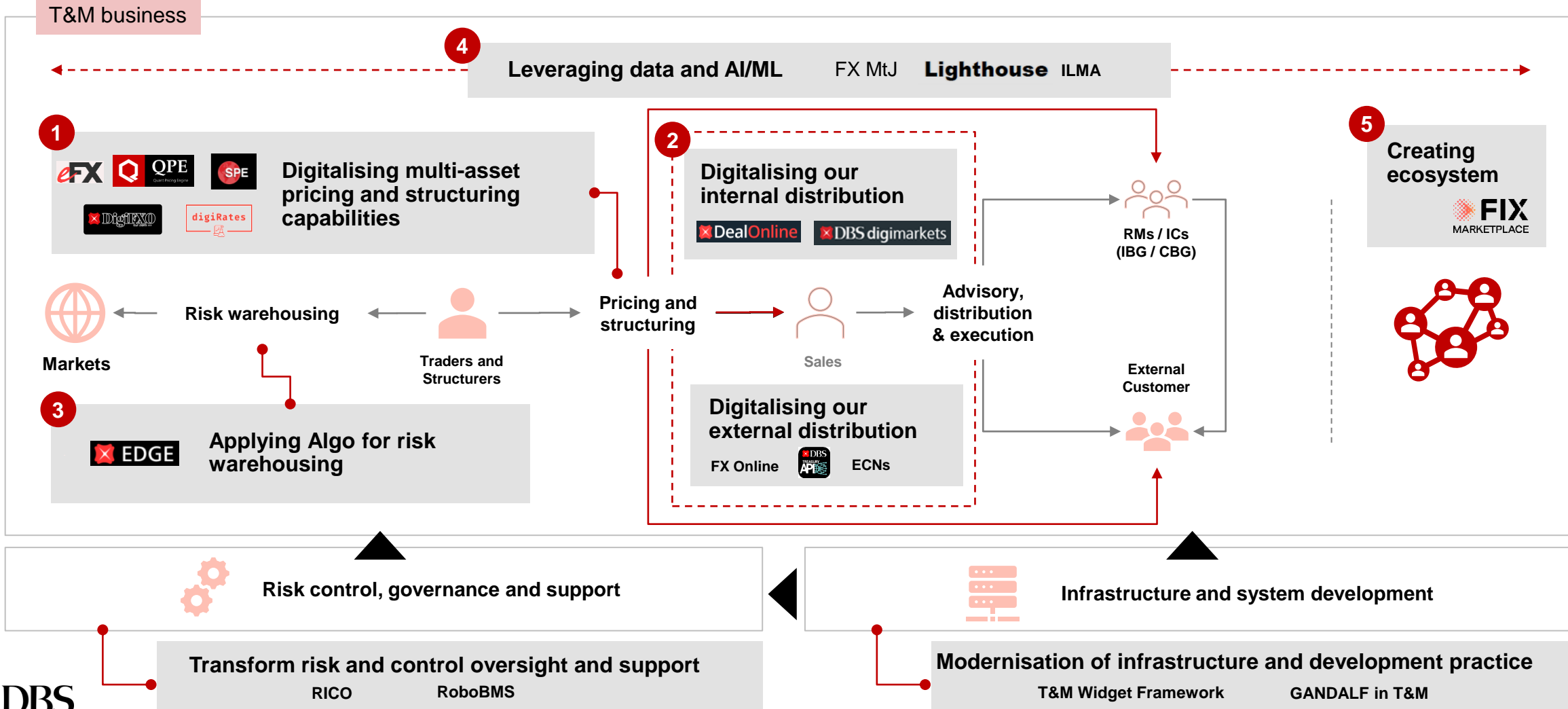


Return on equity (ROE @ 15% tax)



1. Industry data source: Coalition Greenwich Analytics – Coalition Index for Investment Banking. 2017-2022 CAGR excludes revenues relating to M&A, ECM and DCM businesses
 2. Using internal benchmark data of the same 12 peer banks used in Coalition Greenwich Analytics. ROE for DBS & peer banks are normalised on post tax basis using tax rate of 15%

We successfully drove a multi-year digital transformation across the entire T&M business



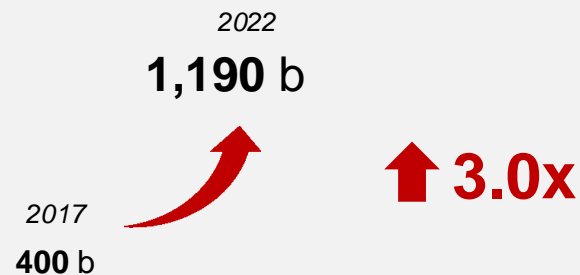
1: Digitalising multi-asset pricing and structuring capabilities to drive volumes

Foreign exchange



- Co-located FX rate engines for **low latency pricing**, powering innovative FX services in the bank

eFX volume growth (US\$)



Derivatives



- **60x faster price response** using cloud Graphics Processing Unit (GPU) farm
- **Streamlined E2E workflow** for auto-pricing and execution
- **Highly scalable** with APIs, microservices and cloud

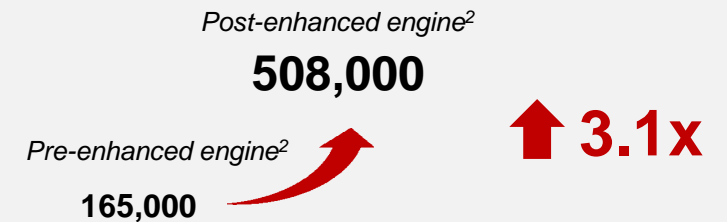
Annual no. of RFQ responded for FX derivatives



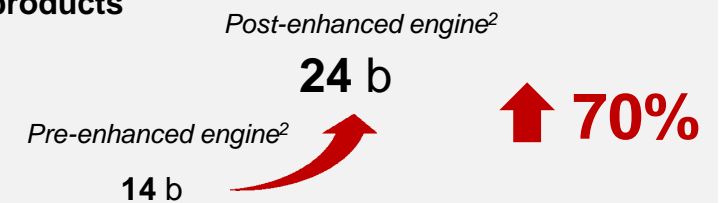
Annual volume (US\$) for FX derivatives



Monthly average of no. of RFQ responded, EQD³ products



Average annual customer volume (S\$), EQD³ products



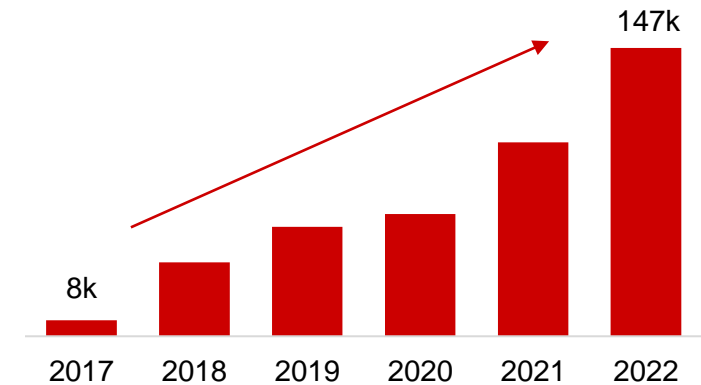
2: Digitalising distribution internally and externally to improve transaction lead time and drive seamless customer service

Internal distribution



- Reducing transaction lead time from 6-8 mins to 1 min¹.
- Covering pre-trade check and post-trade entry to **increase efficiency and mitigate operational risks.**

DigiMarkets transaction count since launch in 2017

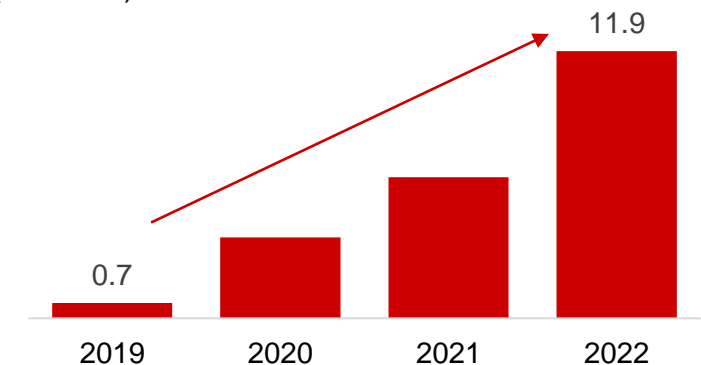


External distribution



- **FX Online** – Offering a transaction portal for seamless customer self-service
- **FX API** – Focusing on B2B2B & B2B2C models, with direct connectivity to client platforms

Treasury API transaction volume since launch in 2019
(in US\$ b)



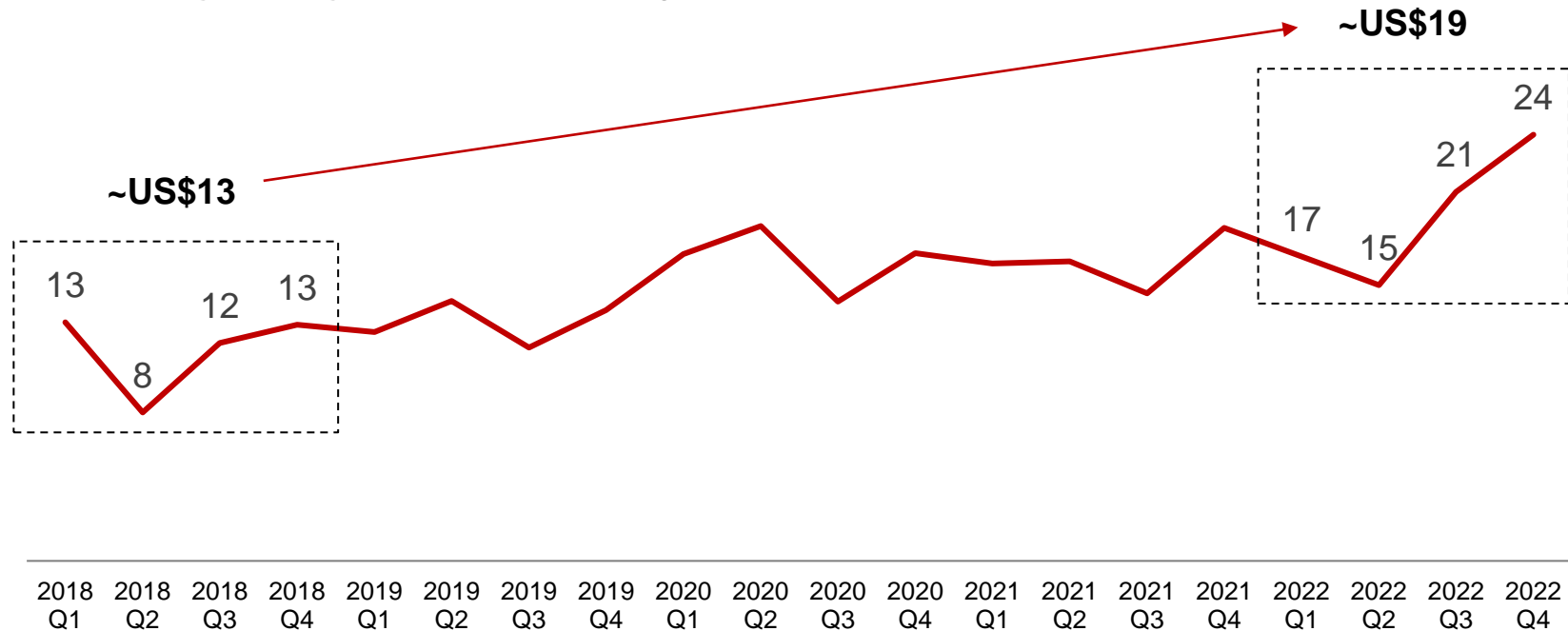
1. For a typical Wealth FX structured transaction

3: Applying Algo for risk warehousing and improved trading efficiency



FX Algo

- **Improving competitiveness** on external venues, via predictive pricing
- **Increased scalability and productivity** via in-house built auto-hedging strategies
- **Achieving optimal strategies** through continually iterating on trade profitability analysis
- **Connecting trading platforms** with integrated news and chat



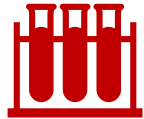
↑ 45%

increase in trading efficiency¹
over the last 4 years

(measured as US\$ revenue per
US\$1m volume traded)

4: Leveraging data and AI/ML to drive benefits across both sales and trading

Sales



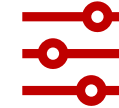
Scaling up experimentation

- Predicting **customer's propensity to trade** based on price sensitivity and activity
- Best time and channels determined for marketing nudges



Managing event-driven leads

- Feedback loop optimised to **improve conversion rates**
- Machine learning optimised to **prioritise leads**



Tiering FX dynamically

- **FX tier margins managed** across market movement, competitor offerings, and client behaviour
- **Real-time reaction** to external and internal data

Trading



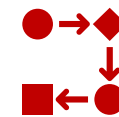
Managing liquidity and money market trading

- Analytics model to optimise **liquidity management** and **money market auction**



Enhancing RFQ hit rate

- **Improvement in hit rate** via secondary bond RFQ pricing model



Improving trading workflow

- AI/ML embedded into trading and risk management workflow to **predict product rollover, cashflow and volatility**

4: Leveraging data and AI/ML to improve pricing, client reactivation, and personalised marketing

AI/ML-driven experimentations and campaigns

1. Pricing optimisation

- Analysis of real-time clicks and transaction behaviours to adjust customer spread to optimise revenue

2. Clients reactivation

- Opting for nudges over upfront discounts or price cuts

3. Trigger marketing

- Analysis of past customer behaviours to push relevant market triggers at the right time and the right channel

✓ Past transaction history

“Have you booked your USD/SGD rate? Prioritise and take charge of your business needs now. Log on to IDEAL to check out the FX rates today.”

✓ Last dealt rate

“Better than before! With the market moving in your favour USD/SGD, lock in your rates NOW!”

✓ Market events – tie up w/ DBS insights

“FOMC is coming up on Wednesday, hedge your USD risk now!”

5: Drive ecosystem agenda to improve our capabilities and value proposition

FIX Marketplace



Capabilities



Digitalized and streamlined **origination workflows**



Direct order placement and allocation for investors



Automated **documentation** generation



Real-time book updates and order tracking

Achievements since launch¹

\$20 b

Trade volume (SGD)

130

Deal count

Value proposition



Improved work **efficiency** for issuers, investors and banks



Lower **deal execution cost**



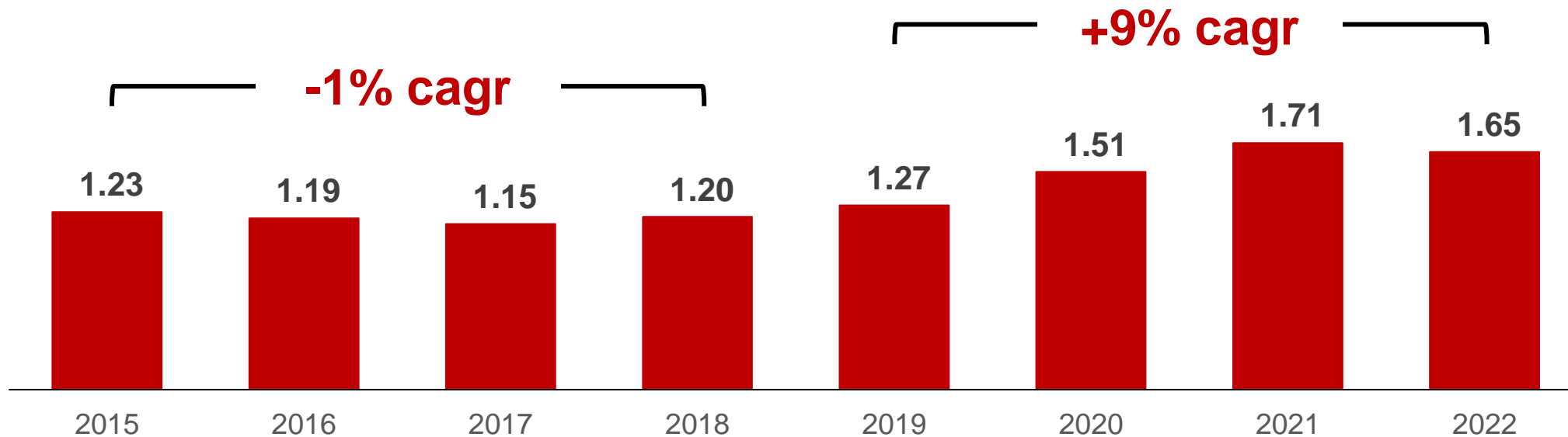
Improved **client experience** to encourage more issuance

2 global and 1 regional innovation awards won in 2022



Well-positioned for sustainable growth driven by growing customer base

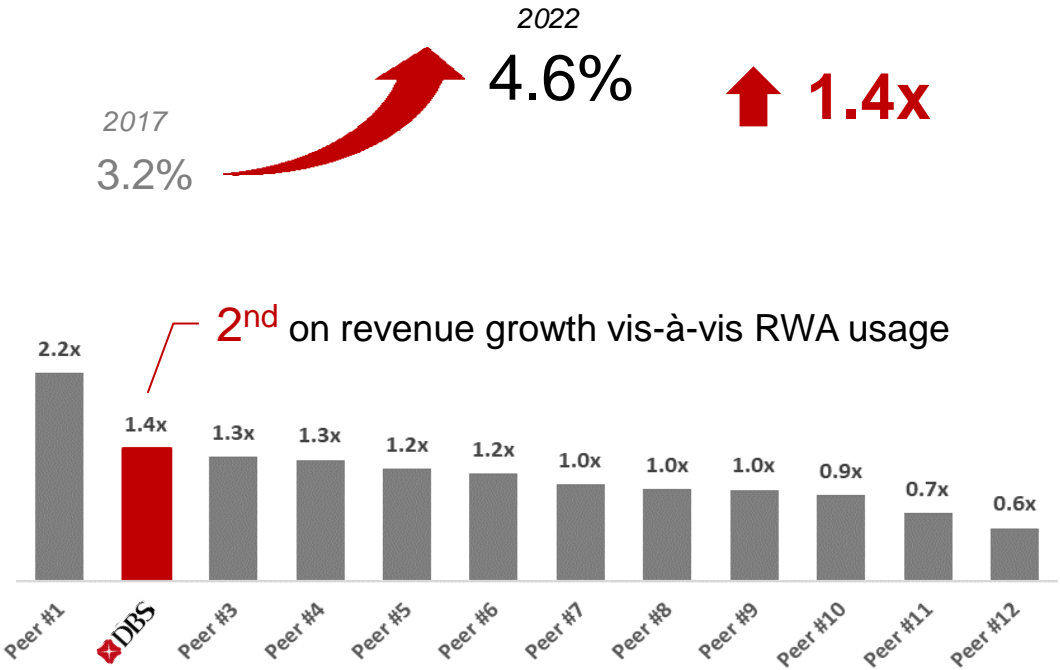
+9% cagr growth in sales revenue (S\$b) from 2019 to 2022 since digitalisation ramp up



Continue to leverage data analytics to drive capital efficiency

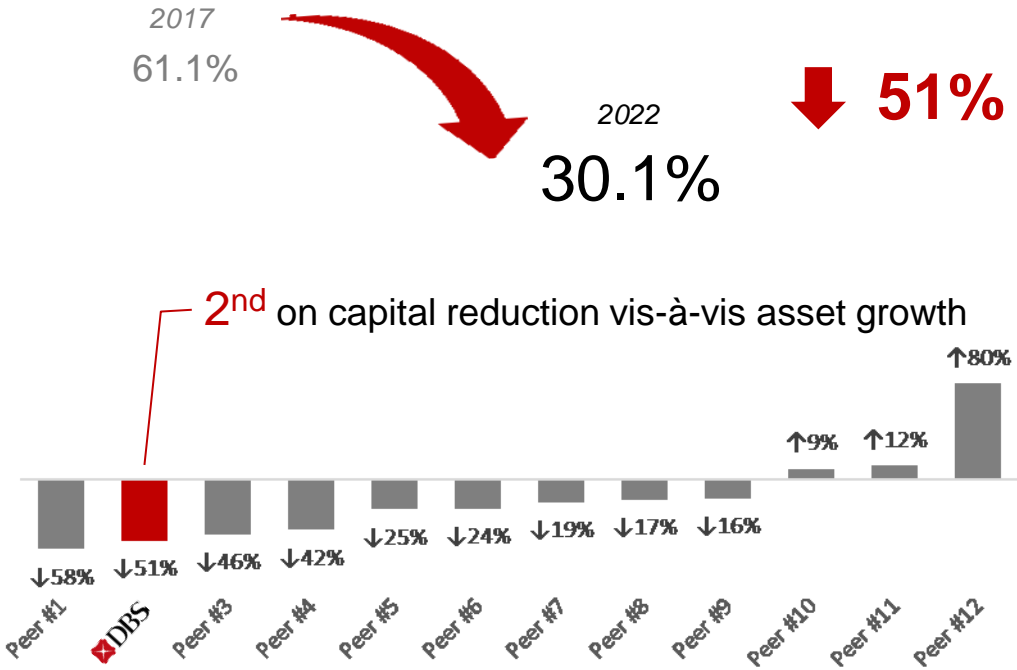
- Data analytics accelerating **disciplined deployment of capital** to ROE accretive opportunities
- **DBS ranked 2nd on capital productivity improvement**, with 2x asset growth and 1.4x revenue whilst maintaining stable RWA

Increase in Revenue-to-RWA



Revenue-to-RWA growth ranked by banks, 2022 vs 2017

Decrease in RWA-to-Asset



RWA-to-Asset reduction ranked by banks, 2022 vs 2017

Digital transformation efforts will only strengthen with time and enable multiple value unlocks

Deepening digital capabilities in structuring and warehousing

Enhancing product structures in all pricing engines

Extend the use of Algo in overseas trading centres

Externalising Digimarkets

Offering the omni-channel Digimarkets experience to external institutional investors

Accelerating Transactional FX MtJ

Implementing AI/ML for continuous experimentation

Driving FIX Marketplace adoption

Growing client adoption and transaction volume

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