



ASM  Pacific Technology

2021 ANNUAL RESULTS PRESENTATION

23rd February 2022

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AGENDA

- Group Key Highlights**
- Outlook**
- Key Investor Takeaways**
- Financial Appendix**
- Q&A**



GROUP KEY HIGHLIGHTS

Group Key Highlights

FY21 Record Breaking Financial Performance

Progress & Development in Advanced Packaging

**Exciting Growth Opportunities – Automotive, Advanced Displays
and Memory Markets**

Group Key Highlights

FY21 Record Breaking Financial Performance

Progress & Development in Advanced Packaging

**Exciting Growth Opportunities – Automotive, Advanced Displays
and Memory Markets**

2021 Group Financial Results

Record EPS, Revenue, Bookings and Net Profit

(+49.3% YoY)

US\$2.82B



Revenue¹

(+65.6% YoY)

US\$3.36B



Bookings¹

(+427 bps YoY)

40.6%



Gross Margin^{1,2}

(+94.5% YoY)

HK\$7.72



EPS



Backlog¹



Net Profit^{1,2,3}



Operating Margin^{1,2}



DPS

(+68.7% YoY)

US\$1.29B

(+273.6% YoY)

HK\$3.24B

(+1,007 bps YoY)

18.9%

(+44.4% YoY)

HK\$3.90



Notes

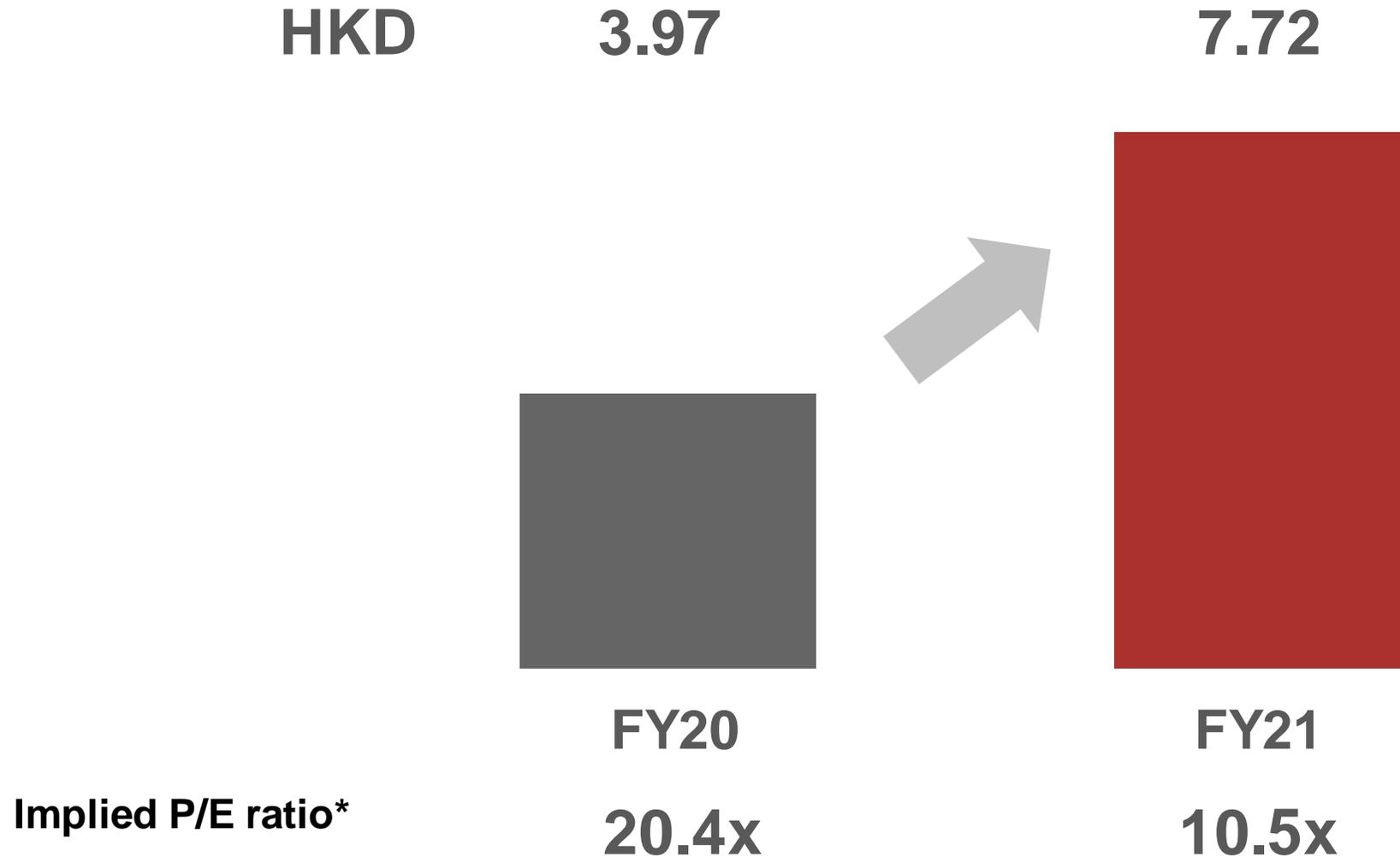
¹ results from continuing operations

² excluding one-off items and their related tax impact recorded in Q4 2020 of HK\$230.9 million

³ excluding one-off items and their related tax impact recorded in Q4 2021 of HK\$65.5 million

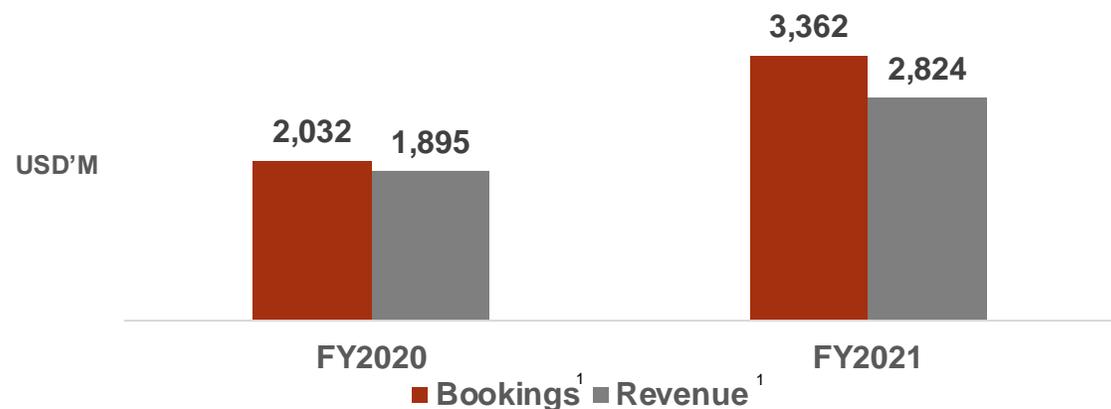
2021 Group Financial Results

Record EPS of HK7.72, Representing Growth of 94.5%



* Implied P/E ratio is computed on the reference closing share price of HK\$80.90, 18 February 2022

FY21 Group Financial Results



| Gross Margin ^{1,2} | FY2020 | FY2021 |
|-----------------------------|--------|--------|
| | 36.3% | 40.6% |



| Operating Margin ^{1,2} | FY2020 | FY2021 |
|---------------------------------|--------|--------|
| | 8.8% | 18.9% |

Record Bookings, Revenue and Operating Profit

Record bookings for SEMI and SMT

FY21 Revenue drivers:

- Prior years under-investment in capital equipment
- Semiconductor self-sufficiency drive
- Broad based end-market demand strength
- Long-term secular macro growth trends

Margin improvement:

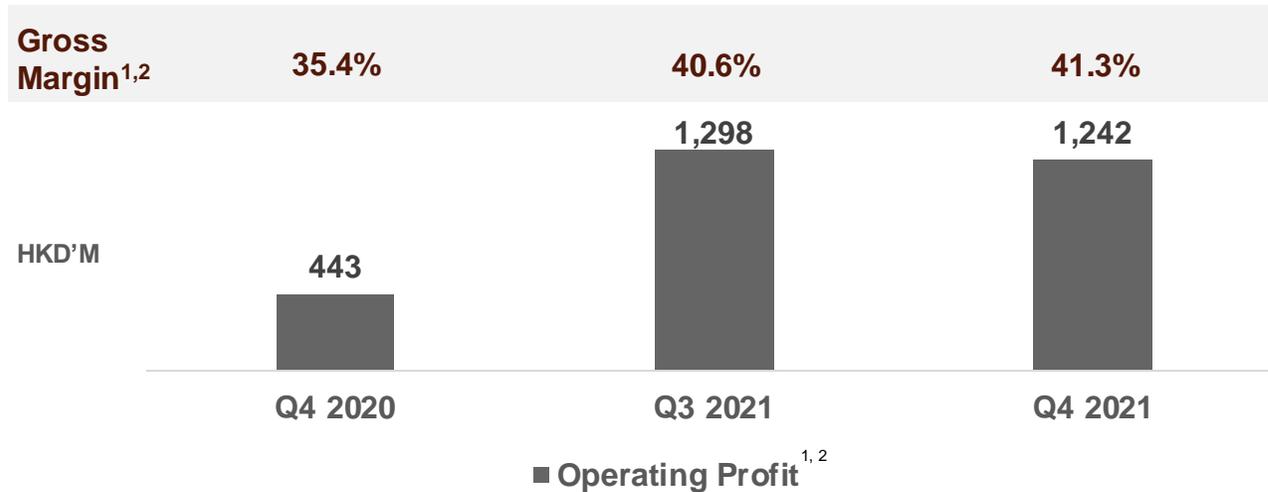
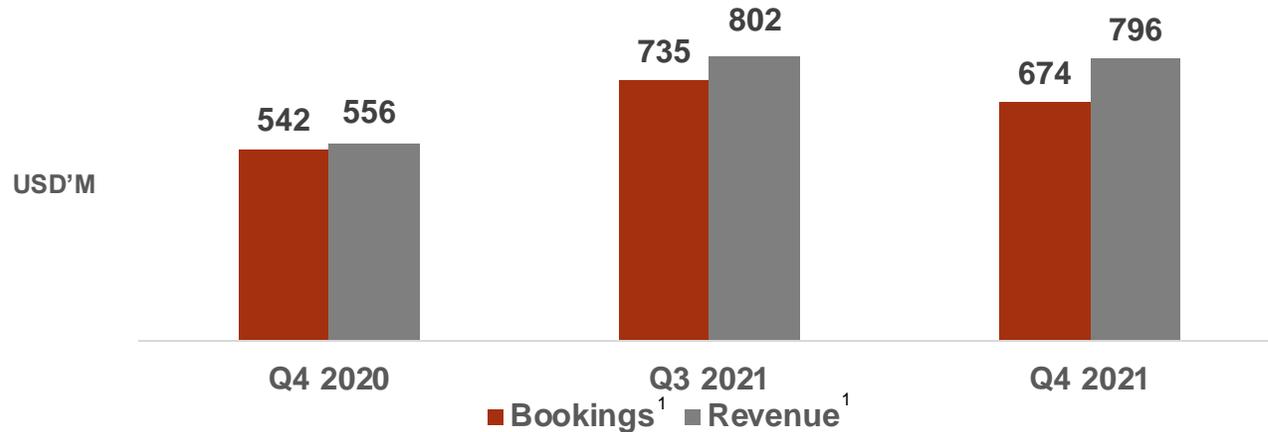
- Higher SEMI and SMT Gross Margin
- High operating leverage

Notes

¹ results from continuing operations

² excluding one-off item recorded in Q4 2020 of HK\$199.3 million

Q4 2021 Group Financial Results



Revenue exceeded guidance

Q4 Bookings:

- Elevated compared to prior years' Q4 level
- QoQ declined in line with seasonality

Margin improvement:

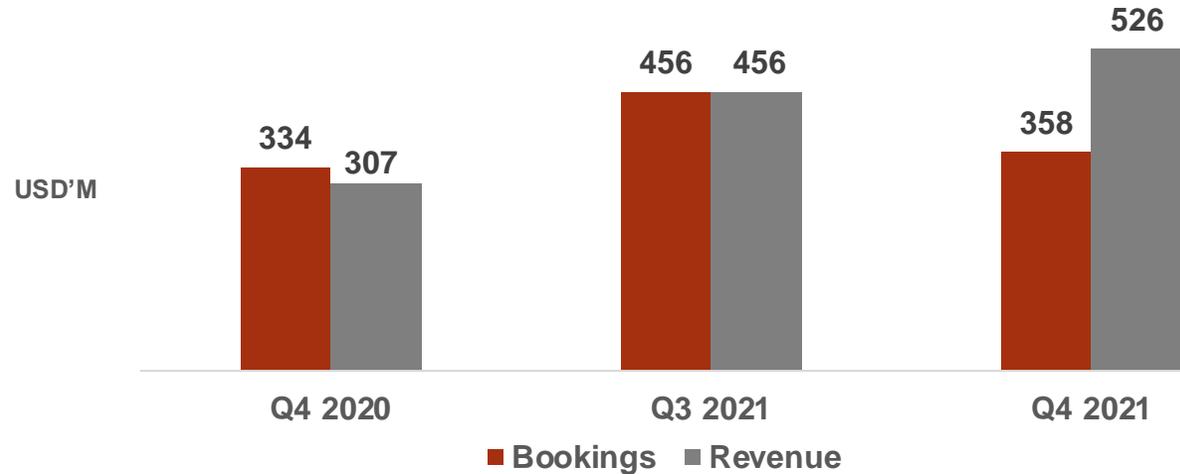
- Higher SEMI revenue mix
- Higher SEMI and SMT Gross Margin

Notes

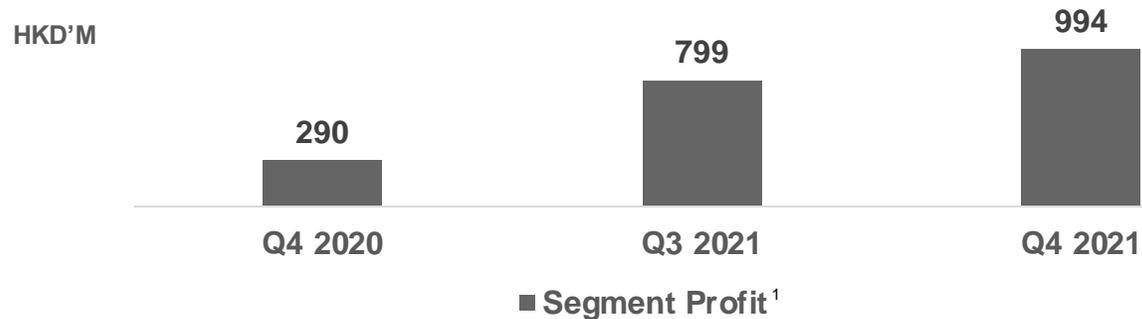
¹ results from continuing operations

² excluding one-off item recorded in Q4 2020 of HK\$199.3 million

Q4 2021 Semiconductor Solutions Segment Performance



| Period | Gross Margin ¹ |
|---------|---------------------------|
| Q4 2020 | 39.0% |
| Q3 2021 | 43.6% |
| Q4 2021 | 43.7% |



| Period | Segment Margin ¹ |
|---------|-----------------------------|
| Q4 2020 | 12.2% |
| Q3 2021 | 22.5% |
| Q4 2021 | 24.3% |

Robust Q4 revenue growth

Q4 Bookings:

- Mainstream – Die and Wire bonders
- Advanced Packaging (AP) – Panel level ECD and TCB
- QoQ declined in line with seasonality

Q4 Revenue drivers:

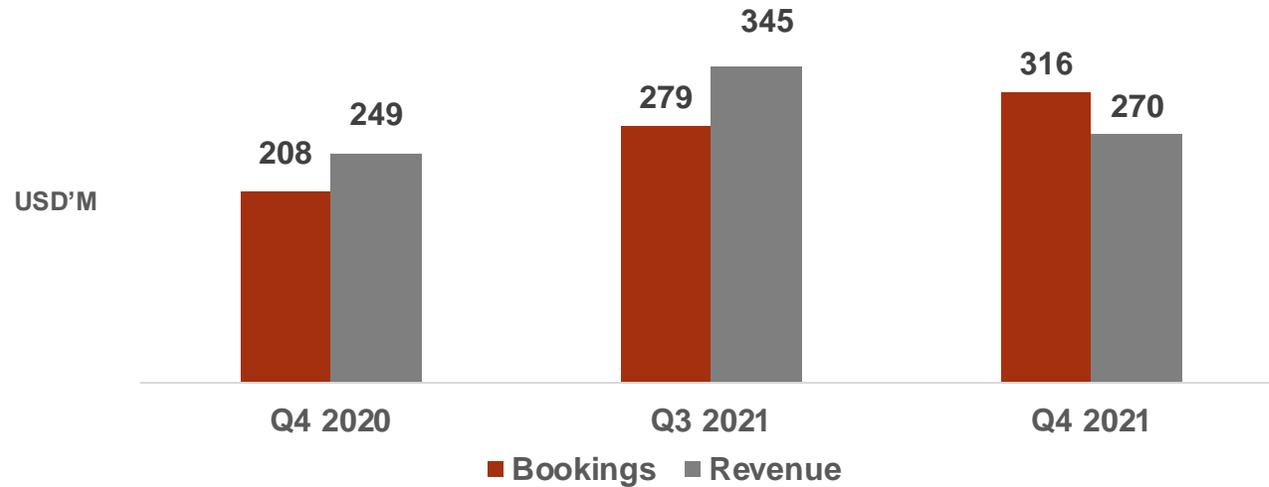
- IC/Discrete
 - Mainstream – Die and Wire bonders and Test Handlers
 - AP – FC bonders, Laser dicing and grooving, Panel level ECD
 - 12-inch Die Bonders gained market share in 2021
- Optoelectronics
 - Conventional and advanced displays, general lighting and photonics applications
 - Silicon photonics registered consecutive QoQ growth
- CIS
 - Declined YoY and QoQ – Semiconductor supply bottlenecks
 - YoY increase – Active alignment revenue supported by broad customer base

Margin improvement:

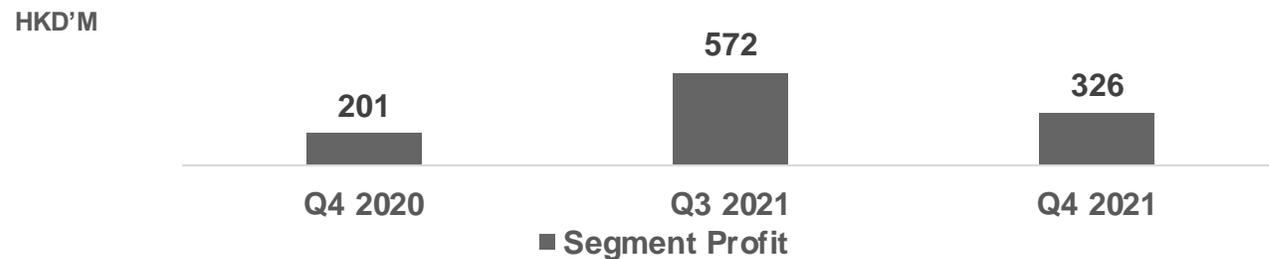
- YoY – Higher volume and capacity utilisation

Note: ¹ excluding one-off item recorded in Q4 2020 of HK\$199.3 million

Q4 2021 SMT Solutions Segment Performance



| Period | Gross Margin |
|---------|--------------|
| Q4 2020 | 31.1% |
| Q3 2021 | 36.6% |
| Q4 2021 | 36.7% |



| Period | Segment Margin |
|---------|----------------|
| Q4 2020 | 10.4% |
| Q3 2021 | 21.3% |
| Q4 2021 | 15.5% |

Automotive and Industrial demand momentum continued

Q4 Bookings:

- QoQ and YoY increase
- Automotive and Industrial demand momentum continued

Q4 Drivers for Revenue:

- Mainstream – High-end placement tools
- AP – SiP from mobile and wearables
- Strong interest in new DEK TQ printer platform

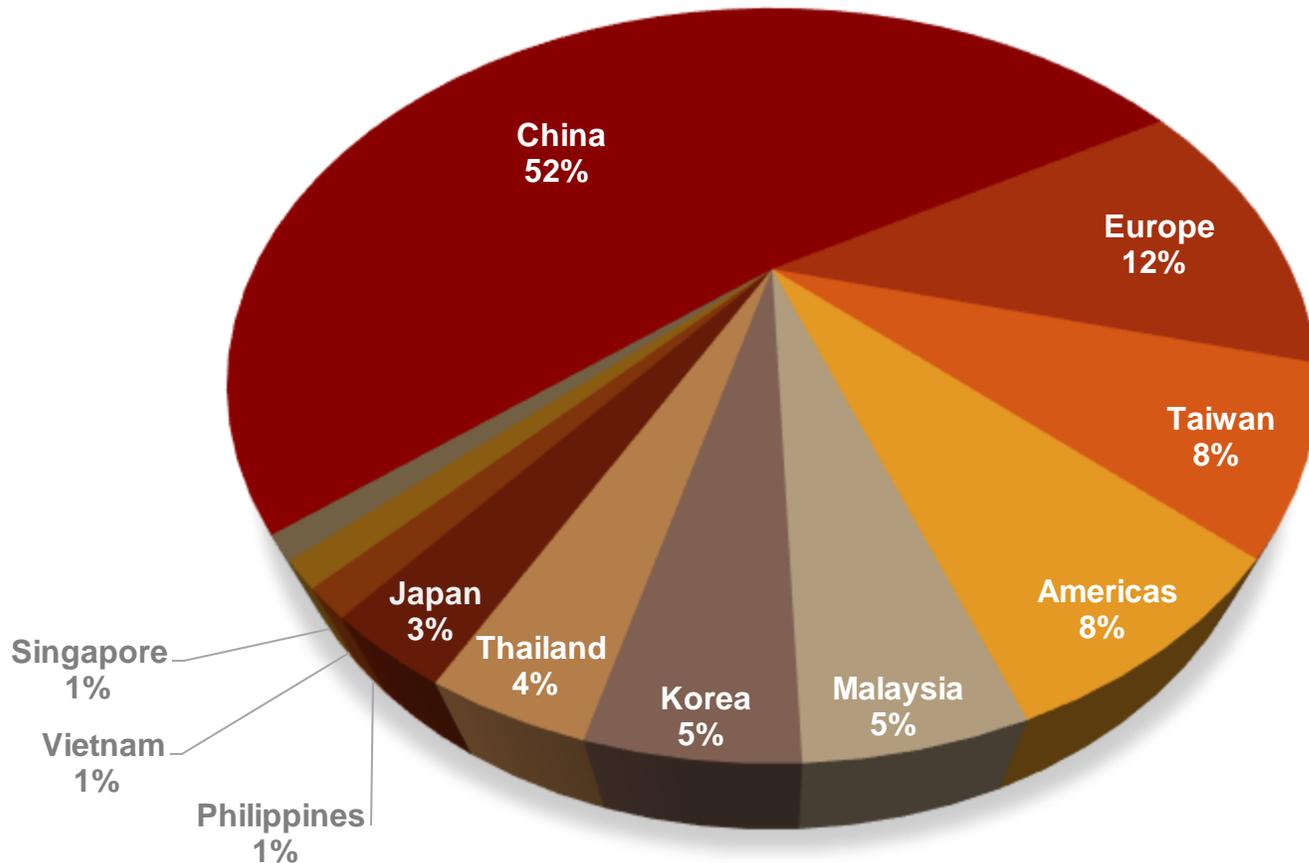
Margin improvement:

- Higher volume and product mix

Key Partner to Industry Leading Customers

Serving Industry-Leading Semiconductor and Electronics Manufacturers Globally

FY21 Revenue Breakdown by Geography



Customer Groups

OEM

Fabless/Foundry

OSAT

EMS

IDM

LED Manufacturers

CIS Camera
Module
Manufacturers

High Density
Substrate
Manufacturers

Group Key Highlights

FY2021 Record Breaking Financial Performance

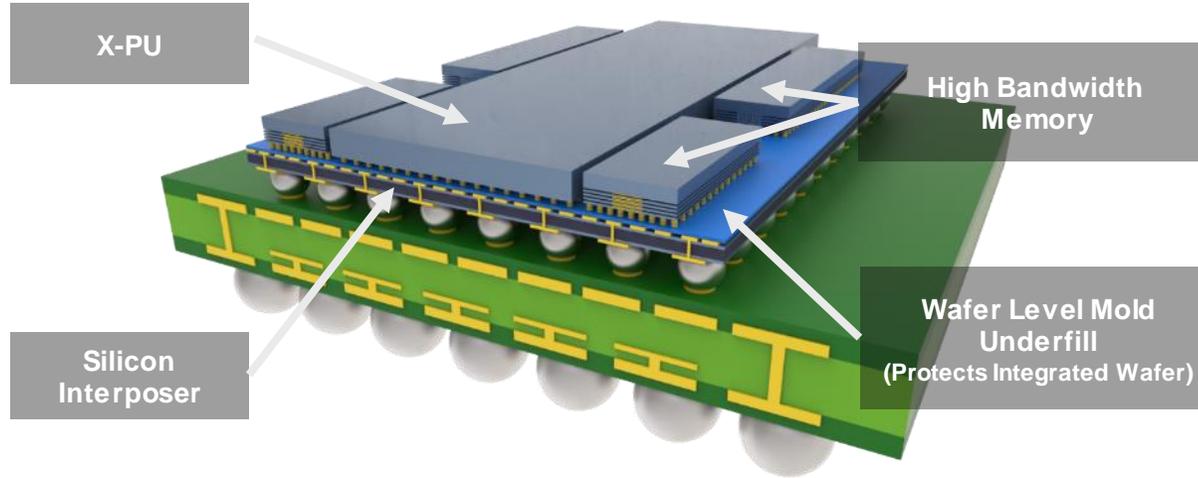
Progress & Development in Advanced Packaging

**Exciting Growth Opportunities – Automotive, Advanced Displays
and Memory Markets**

Advanced Packaging

Broadening Customer Base

The Group's diverse AP portfolio spans wafer-level to die-level high-accuracy placement tools and SiP placement tools, addressing a broad range of packaging technologies (2.5D, 3D-IC, Fan-in, Fan-out Wafer-Level and SiP)



FY21 Revenue approx. USD 590M – 35% YoY increase

- AP Book-to-Bill ratio of 1.15 in FY21, above FY20 level
- Strong customers acquisition momentum in FY21

- Hybrid Bonding – on track for delivery in 2022 for customers' qualification
- Meaningful contributions, in line with customer ramp-up plans, expected in 2023

| Advanced Packaging Processes | Physical Vapor Deposition | Electro-Chemical Deposition – Wafer/Panel Lvl Plating | Laser Dicing | Wafer/ Panel Lvl Molding | Wafer/ Panel Lvl Fan Out | Ultra Precision Die Bonding (Silicon Photonics) | Mass Transfer (Mini/Micro LED) | Multi-Chip Module Bonding | Thermo Compression Bonding | Flip Chip | Wafer Level Fan In | SMT SiP Placement |
|------------------------------|---------------------------|---|--------------|--------------------------|--------------------------|---|--------------------------------|---------------------------|----------------------------|-----------|--------------------|-------------------|
| ASMP Solutions | | | | | | | | | | | | |
| | Apollo | Stratus Series | Laser 1205 | ORCAS | NUCLEUS | NANO | AD300 Series | VECTOR | FIREBIRD | AD8312FC | SUNBIRD | SIPLACE TX Micron |

TCB – Extending our Technological Leadership

Significant Order Win for New Generation Chip-to-Wafer (C2W) TCB tool for Heterogeneous Integration

Existing Generation

Firebird TCB C2S (2019)



- Chip-to-Substrate tool
- Single bond head with accuracy of $\pm 2\mu\text{m}$
- Established dominant installed base worldwide

New Generation

Firebird TCB C2W (2022)



- Latest Generation Chip-to-Wafer tool
- Key features and improvement from existing generation:
 - Dual bond head
 - 2X throughput
 - 2X accuracy ($\pm 0.8\mu\text{m}$)
- **Significant order win close to US\$ 100M from a major customer**

Future Generation



- In Progress: Development of next generation TCB tool
- Enables fine solder bump pitch below $30\mu\text{m}$
- First prototype expected to be delivered by 2nd Half of 2022

Group Key Highlights

FY2021 Record Breaking Financial Performance

Progress & Development in Advanced Packaging

**Exciting Growth Opportunities – Automotive, Advanced Displays
and Memory Markets**

Automotive Electrification – Multi-Year Growth Driver

Wire Bonding
Mass Bonding and Transfer



LED / Advanced Display Solutions

Die Bonding
Active Alignment
Automated Optical Inspection



CMOS Image Sensor (CIS) Solutions

Die Bonding
Wire Bonding
Heavy Aluminum Wire Bonding



Die / Wire Bonding and Molding Solutions

Printing
Pick & Place
Solder Paste Inspection



Surface Mount Technology (SMT) Solutions

TCB
Panel Plating
Laser Dicing/Grooving



Advanced Packaging (AP) Solutions

Encapsulation
Multi Chip Mounting
Silver Sintering



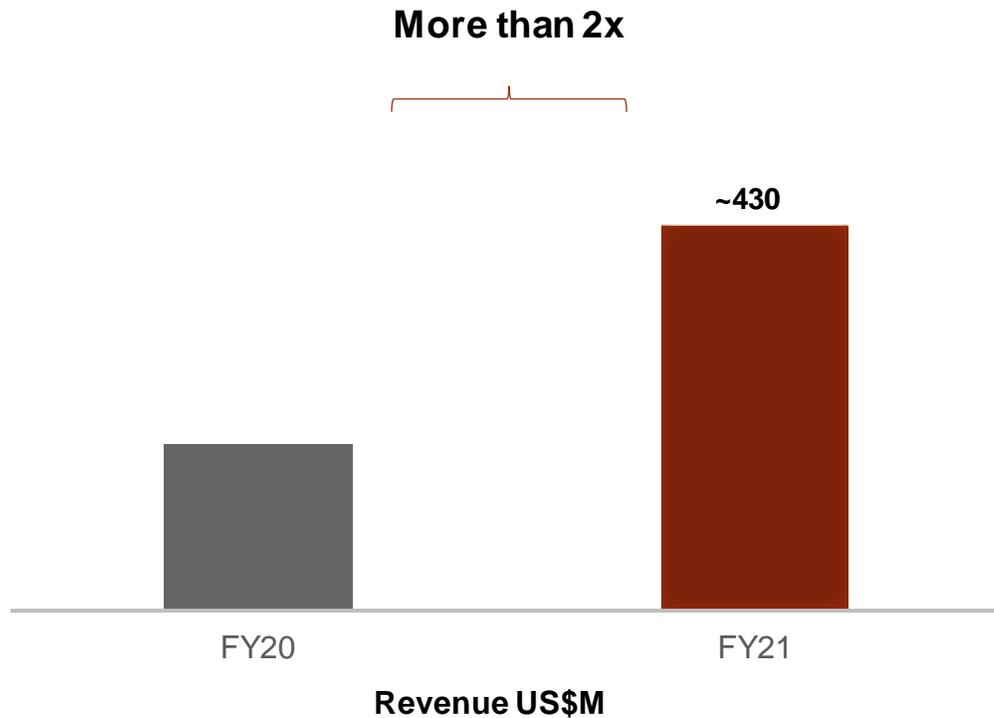
Silver Sintering Solutions



Automotive Electrification – Multi-Year Growth Driver

Comprehensive Solutions to Address Automotive Market

- Revenue from Automotive applications more than doubled vs. FY20
- Number of customers served increased significantly in FY21
- New customers to generate significant opportunities going forward



Silver Sintering Solutions



Power Module

Automotive CIS Solutions



Vehicle LiDAR Module

LED / Advanced Display Solutions



In-Vehicle Micro LED Display

Advanced Packaging Solutions



Self-Drive Computing Board

SMT Solutions



Automotive PCB

Die/Wire Bond & Mold



Power Discrete Packages
Analog, Logic, MCUs

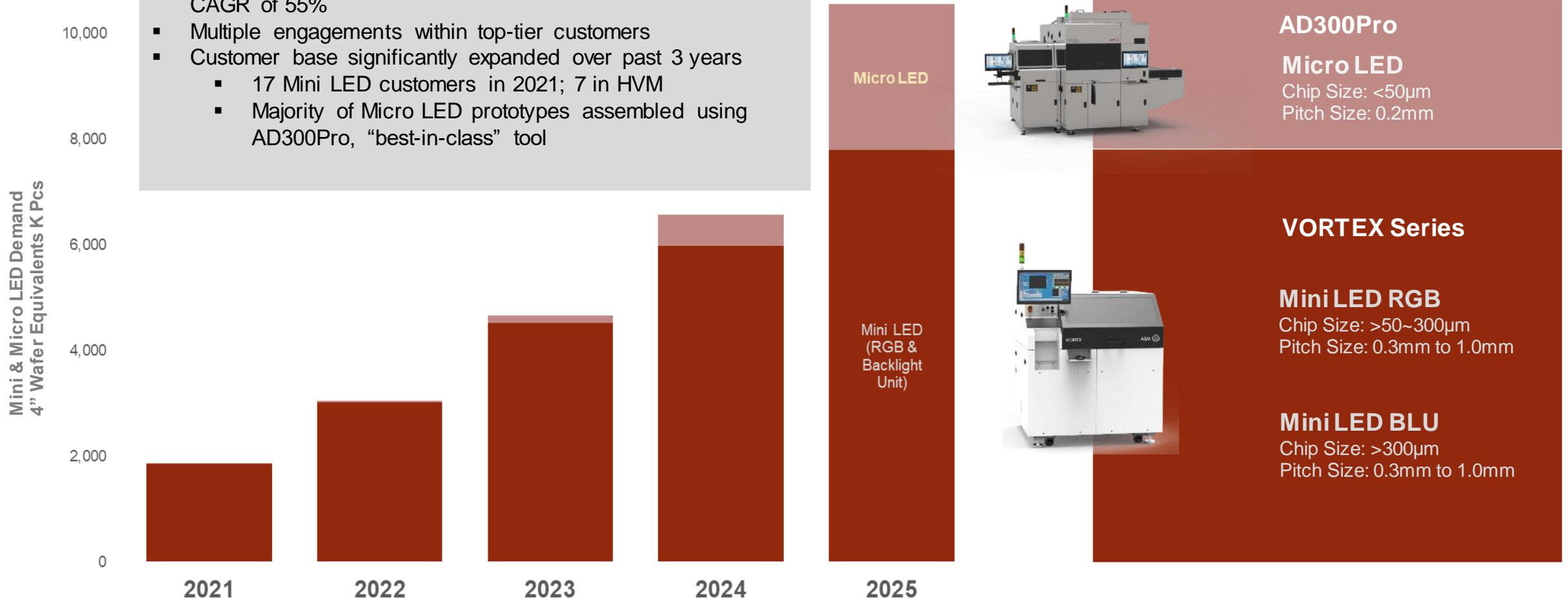


*Automotive solutions provided by ASMP T

Advanced Display – Inflection Point for Growth

Poised to Benefit from Expanding Addressable Market

- Mini and Micro LED wafer output expected to expand at 5-Yr CAGR of 55%
- Multiple engagements within top-tier customers
- Customer base significantly expanded over past 3 years
 - 17 Mini LED customers in 2021; 7 in HVM
 - Majority of Micro LED prototypes assembled using AD300Pro, “best-in-class” tool



Source: Trendforce, Sept 2021

Advanced Display – Inflection Point for Growth

MiniLED BLU

Chip Size: >300µm
Pitch Size: 0.3mm to 1.0mm



Mini LED Laptop



Tablet



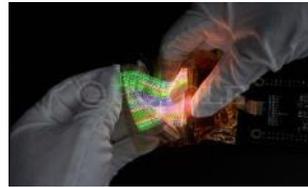
Mini LED TV



Mini LED Monitor

MiniLED RGB

Chip Size: >50~300µm
Pitch Size: 0.3mm to 1.0mm



Stretchable Display



Video Wall



Rollable Display



2K Mini LED RGB TV

Micro LED

Chip Size: <50µm
Pitch Size: 0.2mm



Automotive CID



Micro LED Watch



Transparent Display



89" 5K Video Wall



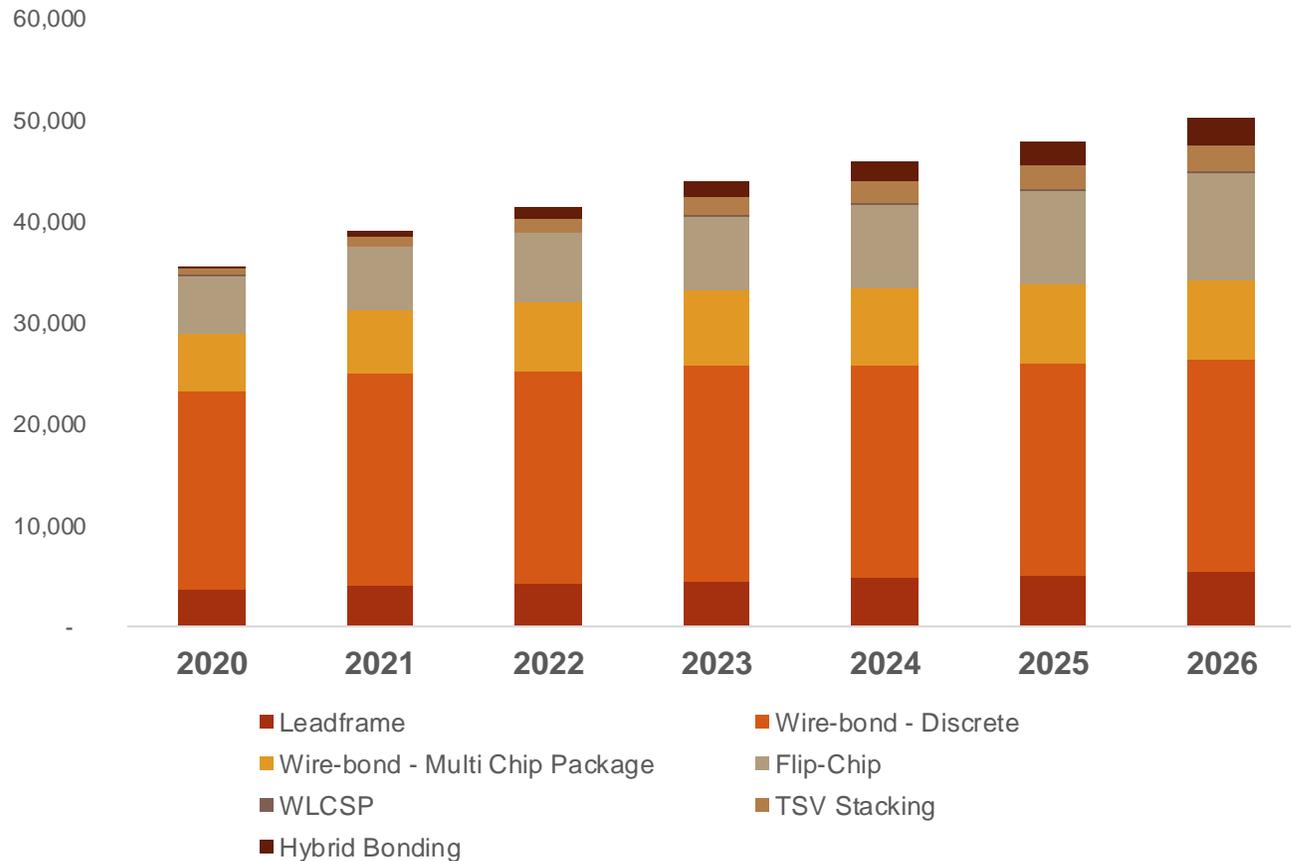
Transparent Display



Memory Market – Strategic Breakthrough

Foothold in High-Bandwidth and Market Share Gain in Conventional Memory Applications

Memory Packaging Market
(Market Volume in '000s 12' wafer equivalent)



Breakthrough to a Sizeable Addressable Market

- TCB qualified by Tier One memory player for HBM3 multi-die stacking application
- Wire Bonder in high volume production of new generation NAND memory

Wire Bonding



Thermo Compression Bonding



Suite of conventional and advanced packaging tools to address the Memory Packaging Market

Source: Yole Développement, Memory Packaging, 2021

Key End-Market Applications

Serving a Broad-based End-Market Applications*

| Computers | Consumer | Communication | Industrial | Automotive | Others** |
|---|---|--|---|--|---|
|  <p>Personal Computers Servers Datacentres HPC Other Computers</p> |  <p>TV Wearables Audio devices Video devices Gaming consoles Other Consumers</p> |  <p>Smart Phones Wired Infrastructure Wireless 5G Communications Infrastructure</p> |  <p>EV Charging Smart Factories Smart Offices Other Industrial</p> |  <p>Visual Sensors Infotainment LIDAR Sensors Power Management V2X communications Entertainment Platforms</p> |  <p>Medical Devices Aerospace Others</p> |

FY21
Revenue

~12%

~23%

~22%

~10%

~16%

~17%

*End Market classification is based on management's best estimates.

**Others include revenue from spares and services and other end market applications that cannot be meaningfully identified.

Key End-Market Applications

Automotive, Consumer and Industrial – Sharp Growth, Doubled YoY

Automotive



- Automotive electrification and general recovery of Automotive sector
- Number of customers served increased significantly in FY21

Consumer



- Wearable devices, gaming devices, general lighting and conventional RGB displays
- Adoption of mini LED in consumer devices heightened demand for advanced display tools
 - 17 new mini LED customers in FY21, with 7 in high volume manufacturing

Industrial



- Broad based demand for automation and control devices in varied application, including smart grids and EV charging infrastructure



OUTLOOK

Revenue Guidance



Q1 2022 Revenue Guidance

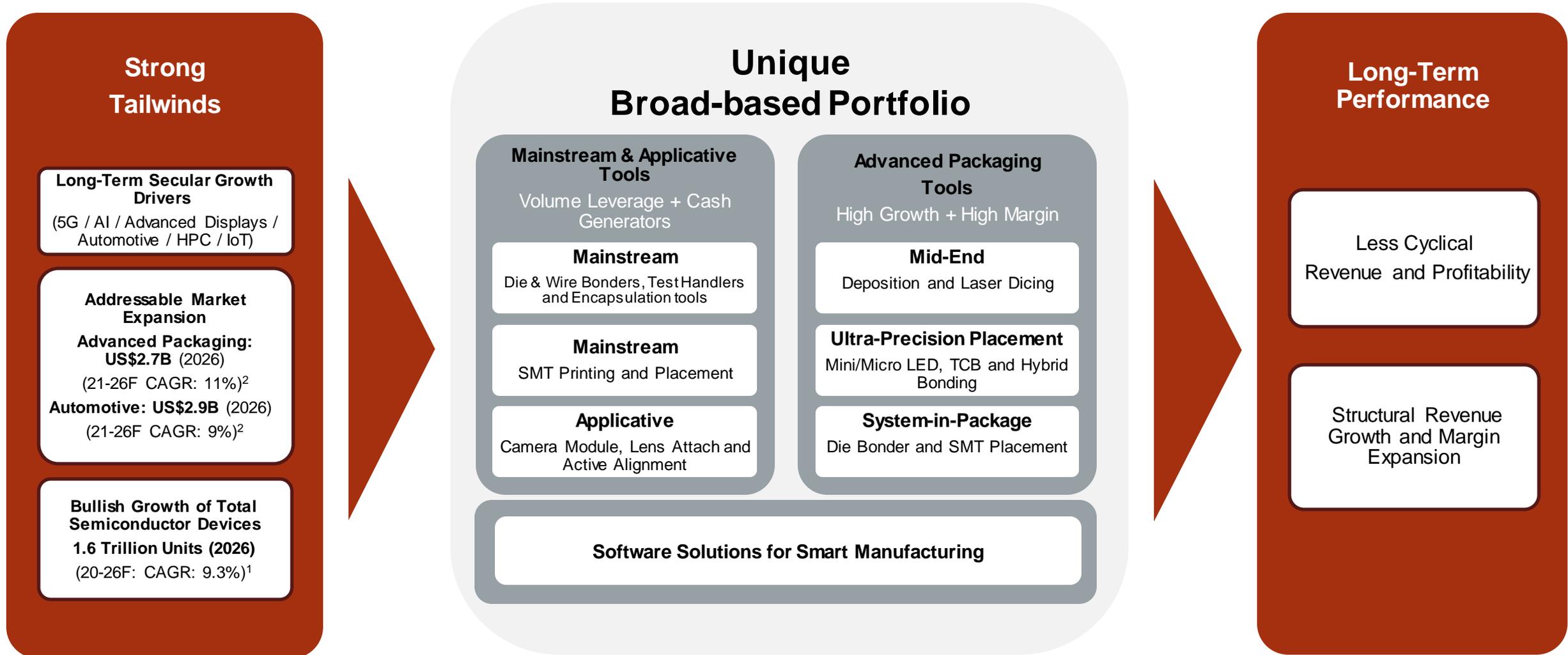
USD 640M to USD 690M



KEY INVESTOR TAKEAWAYS

Key Investor Takeaways

Unique Broad-Based Portfolio



¹ VLSIresearch Worldwide Semiconductor History and Forecast, December 2021

² Company Management's Estimates

Key Investor Takeaways

Two-Pronged Growth and Cost Optimisation Initiatives

Growth

Mainstream & Applicative Tools Grow Market Share

Focus on High-End Segment

Grow in Adjacent Markets

- Memory: Wire Bond
- ADAS: Camera
- EV: Silver Sinter Solutions
- Fuel Cell: SMT Printing

Product Enhancements

- USP Laser Dicing/Grooving
- 12" Die Bonding
- High Power Module Assembly
- Camera for AR/VR

Advanced Packaging Tools Widen Technological Leadership

Intensification of R&D

Grow in Emerging Markets

- HBM3: TCB Die Stacking
- Mini/Micro LED: Mass Bonding
- System-in-Package: SMT & Multi-Chip Module Bonding
- HPC: Hybrid Bonding

Process Innovations

- Ultra fine-pitch TCB
- Sub-surface Laser Dicing
- Glass Stacking for AR/VR
- Laser-Assisted Mass Bonding for Micro LED

Exciting Growth Prospects of AIoT-enabled Smart Factory

Cost Optimisation

Improving Product & Operational Cost Structures
(Procurement / Design to Cost)

Enhancing Manufacturing Flexibility & Scalability
(Optimal Mix of Internal vs. External Manufacturing)

Long-Term Performance

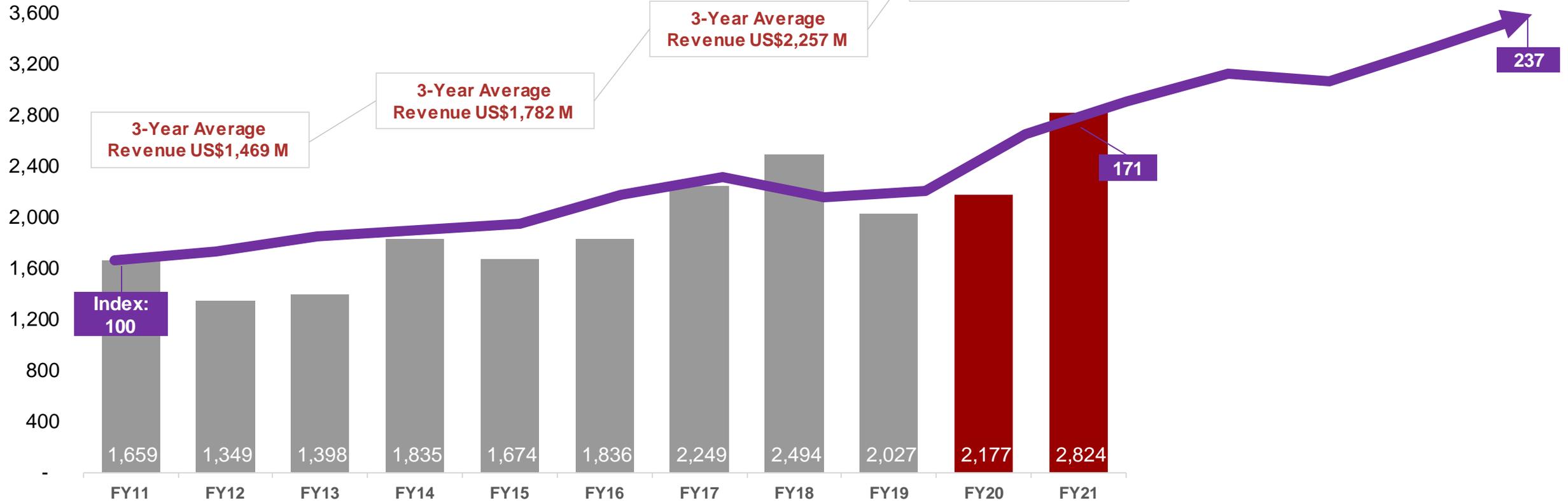
Less Cyclical Revenue and Profitability

Structural Revenue Growth and Margin Expansion

Key Investor Takeaways

Through-cycle Revenue Growth in Tandem with Semiconductor Devices Growth

Group Revenue (in US\$M)



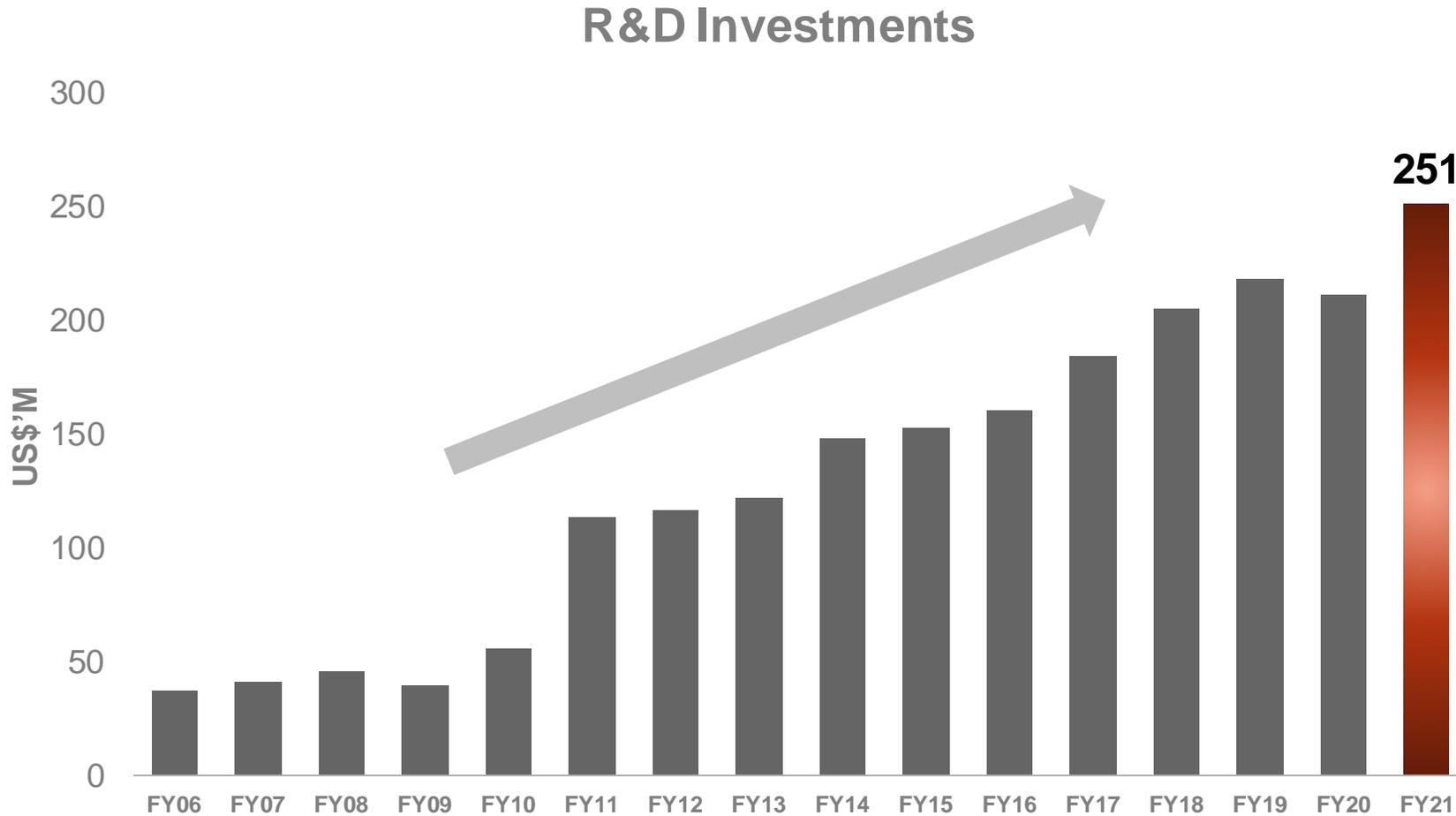
Note: The number of semiconductor units produced in 2011 is set at index 100

Semiconductor Units, Source: VLSIresearch, Dec 2021

Legend
— Semiconductor Units
█ █ ASMPT Revenue

Key Investor Takeaways

Increasing R&D Expenditure



Commitment to R&D

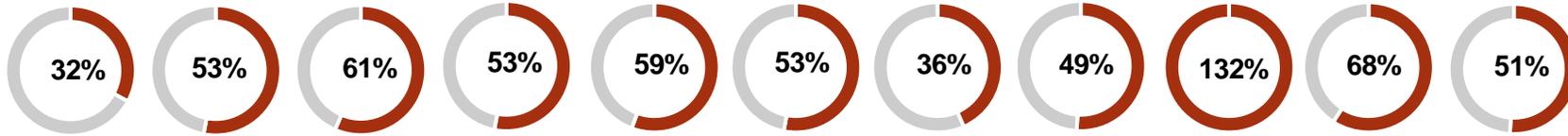
- About 10% of Equipment Revenue is invested into R&D each year
- R&D expenditure for FY21: US\$251m

Key Investor Takeaways

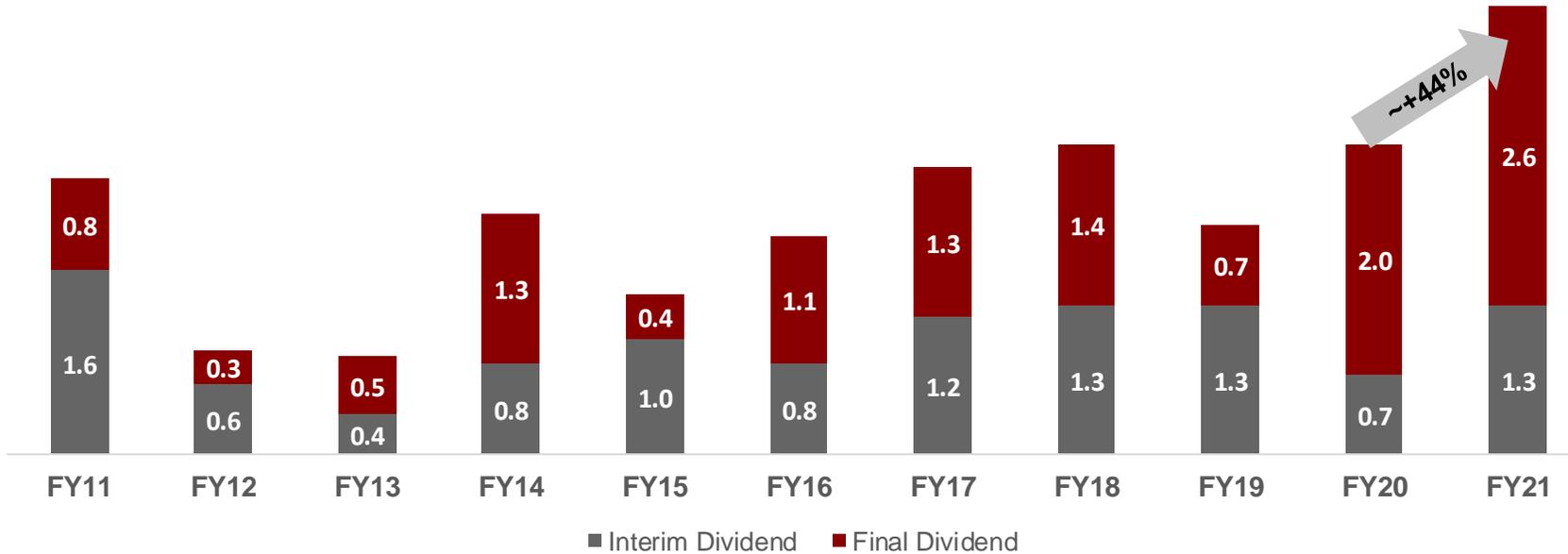
Attractive and Sustainable Dividend Payout Ratio Policy Supported by Sustainable Cash Flow Generation

Dividend Payout (%)

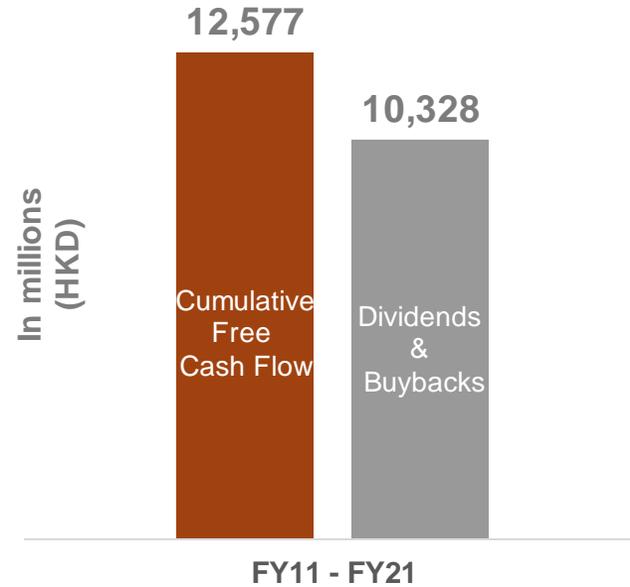
Annual Dividend Payout



Dividend Per Share (HKD)



In millions (HKD)



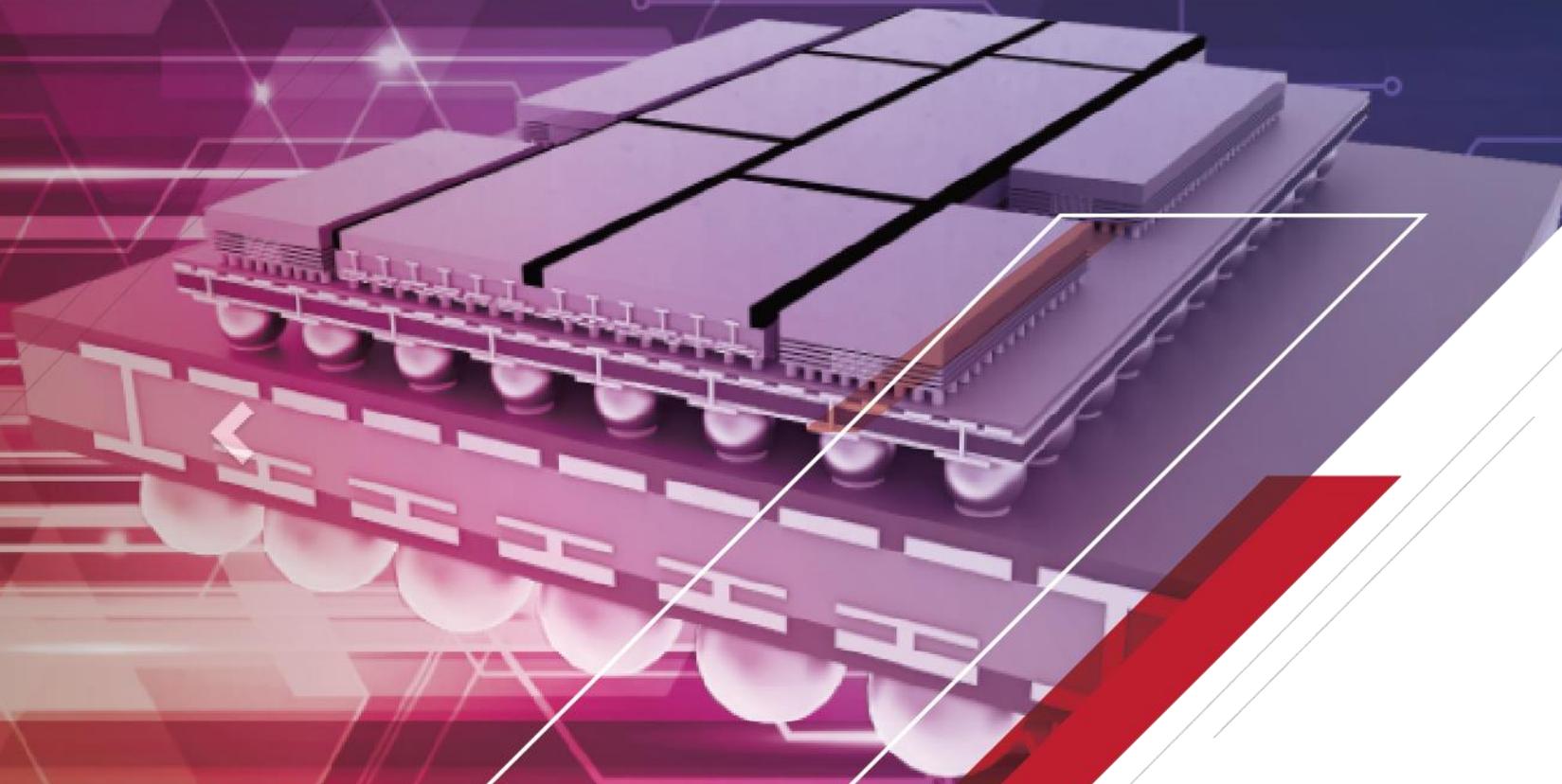
Dividend policy of consistent annual dividend payout ratio of around 50%
(consistent with average dividend payout ratio FY11-FY21)

Strong Cash Flow Generation and Returns to Shareholders

Key Investor Takeaways

What Makes ASMPT a Compelling Value Proposition

- Strong and sustainable cash flow generation from Mainstream and Applicative Tools fueled by bullish semiconductor devices unit growth
- Continual margin expansion from intensification of R&D in high growth and high margin Advanced Packaging and Automotive market segments funded by strong cash flows
- Leadership position in key electronic sectors from mid-end to back-end to SMT cushions cyclical volatility and underpins Through-Cycle revenue and profitability growth
- Dividend payout ratio of 50% generates attractive returns to Shareholders

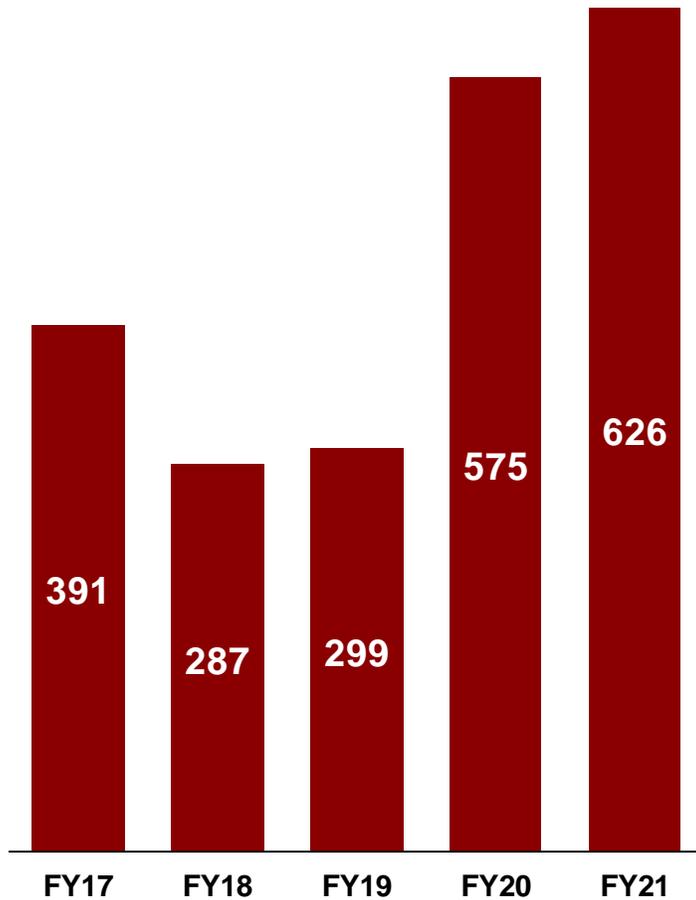


FINANCIAL APPENDIX

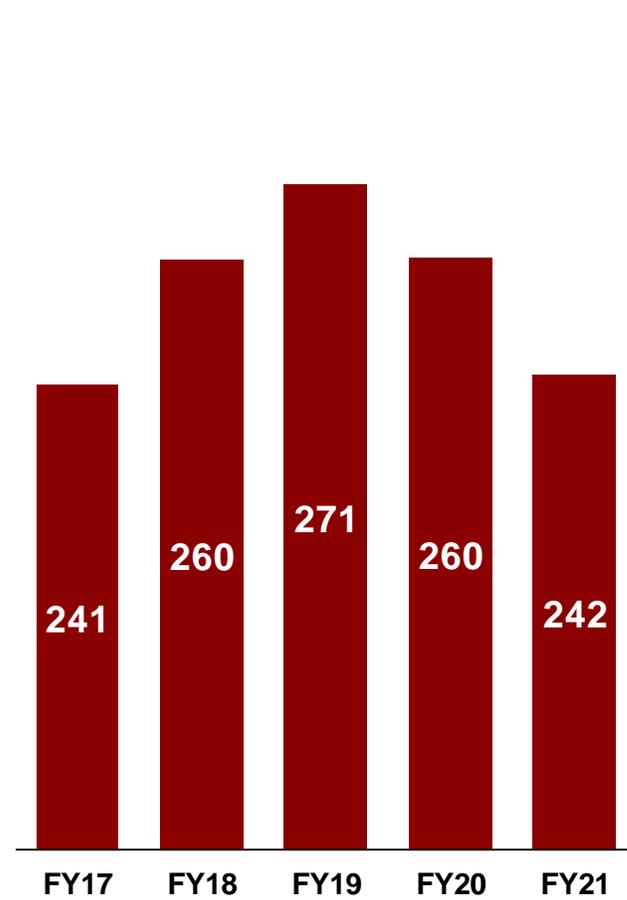
Group Balance Sheet Highlights

Strong Cash Balance with Improving Cash Conversion Cycle

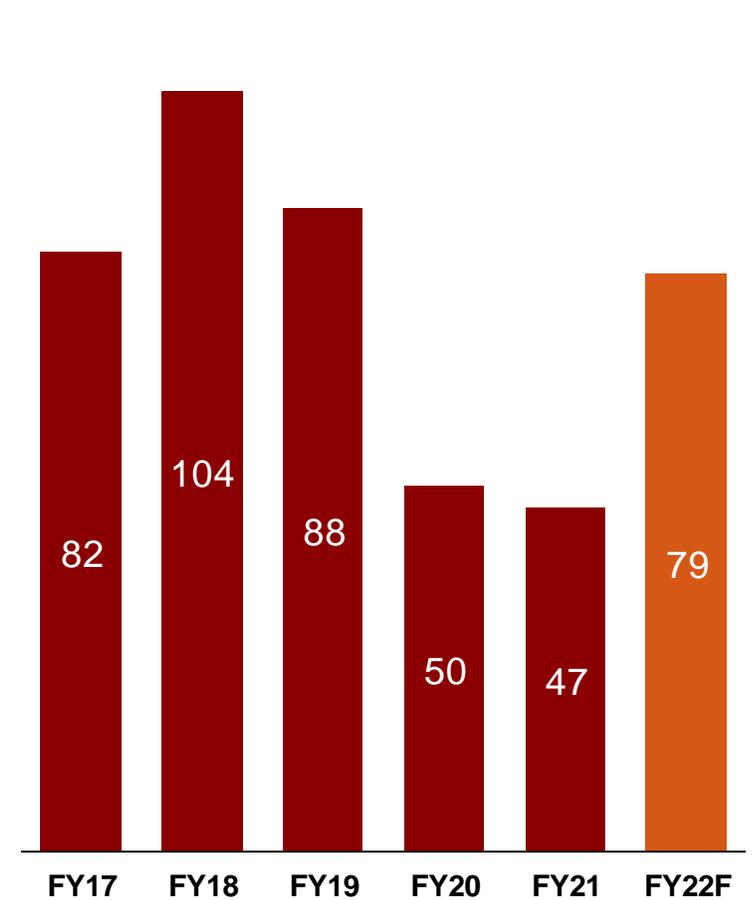
Cash and Bank Deposit
(USD'M)



Cash Conversion Cycle
(Days)



Capital Expenditure
(USD'M)





Q&A



THANK YOU