

2019.08.28



Viva Biotech  
Interim Report

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**Cheney Mao Ph.D.**

*Founder, Chairman & CEO*

- ✓ Selected to participate in the “**The Thousand Talents Plan**” initiated by Shanghai government in August 2012 and the PRC central government in March 2013
- ✓ Ph.D. in Biochemistry from **Cornell University**
- ✓ Post-doc research from **Duke Medical Center**
- ✓ Former Director of the Department of Structural Biology of **Parker Hughes Institute**

## 1 Industry Overview

## 2 Business Review



**Fengmao Hua**

*Founder & CFO*

- ✓ MBA from **International University of Japan**
- ✓ ~**20** years of experience in the investment banking industry
- ✓ Former Head of Direct Investment and Investment Banking Department in **BOCOM International**
- ✓ Former Managing Director in **CLSA**

## 3 Financial Analysis

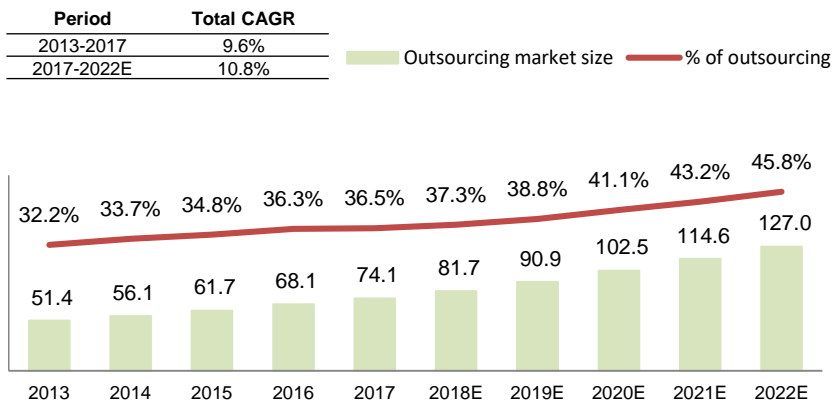
## 4 Future Strategies

# 01 Industry Overview

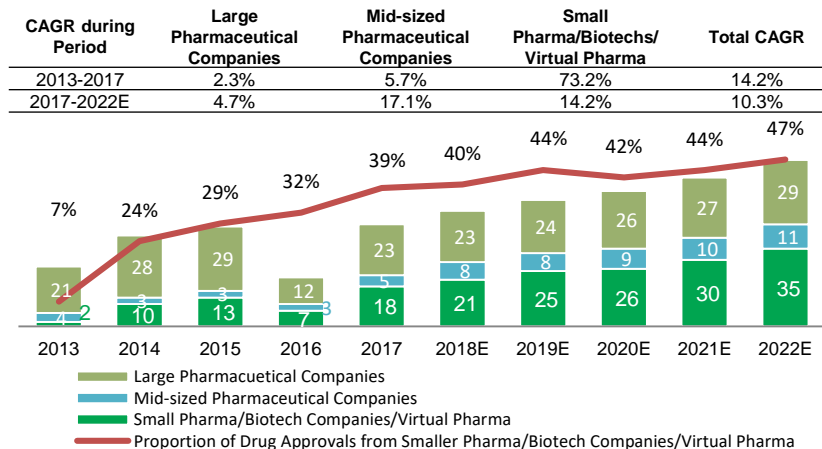
# Positive Outlook of Global Pharma Outsourcing Market and Drug Innovations

## Global Pharma Outsourcing Market, 2013-2022E

Billion USD



## New Drug Approval by Size of Originator, 2013-2022E<sup>1</sup>



**Strong fundamentals in global pharma outsourcing industry and activeness in drug innovations driven by small & virtual companies will benefit Viva's core businesses:**

CRO

Incubation

Source: Frost & Sullivan Analysis

Notes: <sup>1</sup> "Large pharmaceutical companies" = Pharmaceutical companies with sales over USD1 billion; "Mid-sized pharmaceutical companies" = Companies with significant sales of usually between a few USD100 million and USD1 billion; "Small Pharma/Biotechs/Virtual Pharma" = Other smaller companies with sales revenue lower than USD100 million

# Active Market in Broader Healthcare Space

Recent HK biopharma/CRO/CDMO IPOs witness strong momentum in fund raising<sup>1</sup>

 HANSO PHARMA	 FRONTAGE	
\$1,003mn	\$205mn	\$150mn
 康希诺生物 CanSinoBIO	 基石药业 CSTONE PHARMACEUTICALS	 君实生物 TopAlliance
\$173mn	\$328mn	\$453mn
 药明康德 WuXi AppTec	 Innovent 信达生物制药	 H M Hua Medicine 华领医药
\$1,061mn	\$485mn	\$114mn
 BeiGene	 歌礼 asclepis	 WuXi Biologics Global Solution Provider
\$903mn	\$400mn	\$587mn

Sizable companies continue to be acquisitive in expanding current capabilities<sup>2</sup>

 Pfizer		 charles river	
\$11,100mn		\$507mn	
 IPSEN Innovation for patient care			
\$1,094mn		\$8,013mn	
			
\$2,085mn		\$945mn	
			
\$8,795mn		\$800mn	
			
\$11,624mn		\$5,231mn	

Source: Dealogic, IFR Asia, FinanceAsia, Company website, Dealogic, CapitalIQ as of Aug 2019

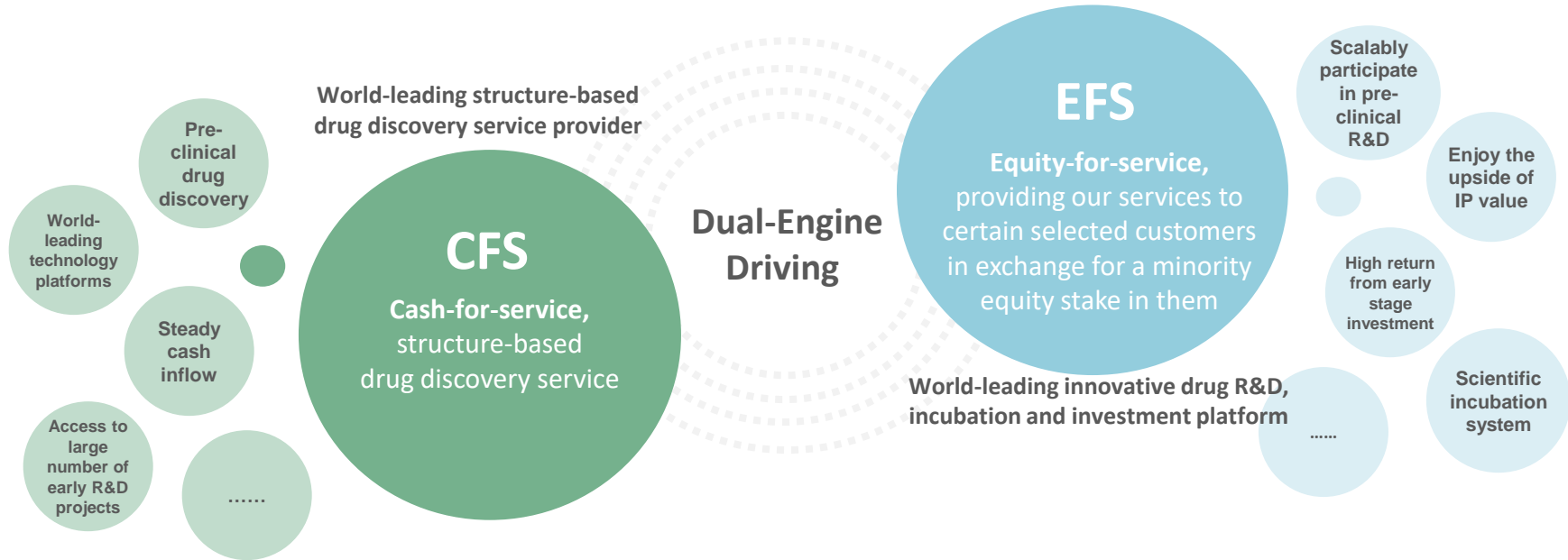
Note: <sup>1</sup> Numbers indicate fundraising amount in US\$m

<sup>2</sup> Selected M&A deals from 2018 to 2019YTD with deal size above US\$500mn in the pharmaceutical, biotechnology and CRO sectors; numbers indicate deal value in US\$m

# 02 Business Review

# 1 Our Business Model

We have developed an innovative business model combining the conventional cash-for-service (CFS) model, pursuant to which we receive cash service fees from our non-investee customers, and our unique equity-for-service (EFS) model





# Drug Discovery Service

--8 technology platforms, 4 of them leading the world



22 authorized patents and 4 pending patents in **China and US**

## SBDD Platform

- Investigate the mechanism and function of the proteins
- Determine the crystal structure of drug target proteins
- 4 different protein expression systems
- One of the world's leading drug discovery service brands in the area of protein sciences and structure biology
- Library compound screening is an important part in drug discovery
- Unique screening technology platform combining three ASMS screening technologies
- Can accommodate wide selection of screening formats and conditions, and is fast, flexible, label-free, high throughput and more cost-effective



## FBDD Platform

- Uses libraries with lower molecular weight
- FBDD library was designed with structural diversity as well as the need for mass spec detection
- Combining a proprietary FBDD compound library with our ASMS screening technology
- Approximately 50% of the marketed drugs and a considerable portion of drugs under development modulate membrane proteins
- One of the most challenging target classes for drug discovery
- Successfully provided services for antibody drug discovery based on purified membrane proteins



## ASMS (Affinity Selection Mass Spectrometry) Screening Platform



Medicinal Chemistry Research



In Vitro Pharmacology

## Membrane Protein Targeted Drug Discovery Technology



Antibody Generation



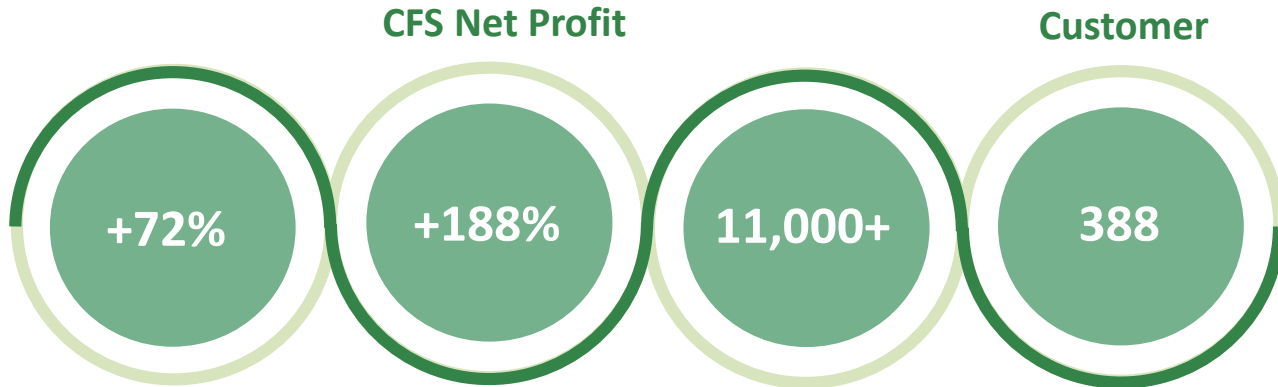
Molecular Cloning Platform

## 2 Drug Discovery Service (cont'd)

### --Outstanding achievement for CFS business

Net profit from CFS business increased significantly from 14mn RMB in 2018H1 to **41mn RMB** in 2019H1, representing an increase of **188%** YOY

We provided drug discovery services to **23** new customers worldwide in 2019H1, making the total high-quality customer number increase to **388**



#### CFS Revenue

Revenue from CFS business increased to **105mn RMB** in 2019H1, representing an increase of **72%** YOY

#### Protein Structure Delivered

Over **11,000** protein structures were delivered to our customers, where about **1,900** were delivered in 2019H1

## 2 Drug Discovery Service (cont'd)

--Rapid growth to be expected



### Customer Retention

Revenue generated from repeated customers accounted for **83%** in 2019H1, remaining steady to 70%, 89% and 81% in 2015-2018.



### Customer Structure

Revenue contributed by top ten customers increased **63%** YOY and reached to **65mn RMB**. While as a percentage of the total revenue, it decreased from 51% to **45%**, representing the increase demand from core customers as well as the diversification of our customer base



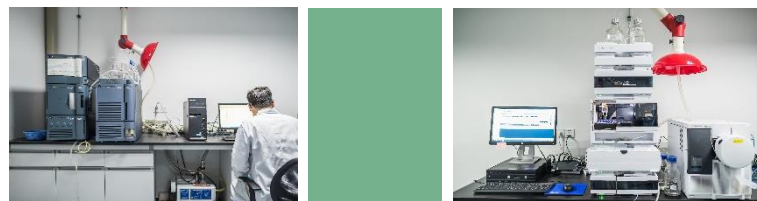
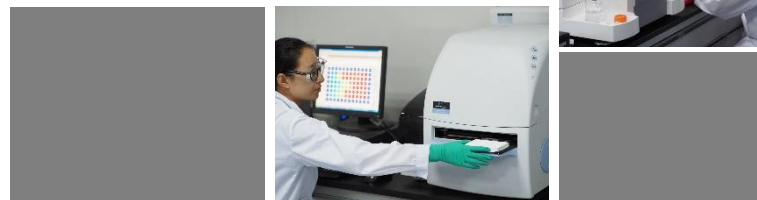
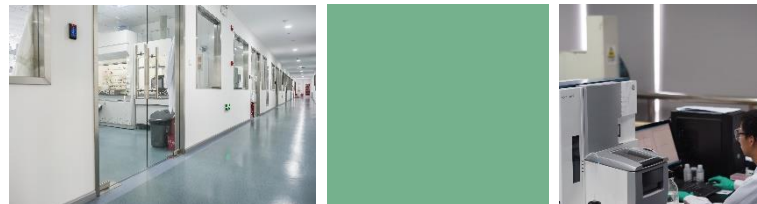
### Backlog Orders

As end of 2019H1, there are **243** customer orders with total contract value amounting to **207mn RMB**, representing an increase of **59%** YOY



### Laboratory Facility

The gross floor area of laboratories located in Shanghai Zhangjiang High-Tech Park increased by approximately **5,000 sqm** in 2019H1, around **34%** of our existing facilities. The new laboratories are currently in equipment debugging stage and will soon be ready for the increasing service demand

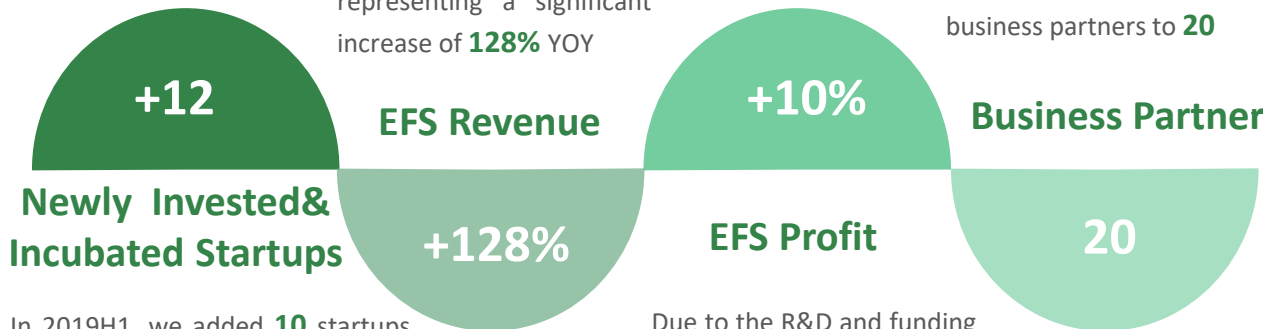


# 3 Incubation and Investment

## --EFS business scaled up steadily

Along with the increasing incubation project number, revenue from EFS business reached to **37mn RMB**, representing a significant increase of **128%** YOY

In 2019H1, we continued to scale up our innovative Business Partner system and attracted **3** world-class scientists to join us, making the total number of our business partners to **20**



In 2019H1, we added **10** startups into our incubation portfolio and made additional investments in **2** of our existing portfolio companies. In total, **37** startups are invested & incubated, with an average shareholding of **23%**

Due to the R&D and funding progress of our portfolio companies, the profit from EFS business increased to **58mn RMB**, representing a growth of **10%** YOY



**Hongxing Zhou, Ph.D.**

- ✓ Experienced in the **discovery and engineering of human antibodies**
- ✓ Over 20 years R&D Experience in **GSK, Amgen**
- ✓ Ph.D., Biophysics & Biochemistry of **New York University**



**Yimin Zou, Prof.**

- ✓ Former professor of **Neurobiology, Pharmacology and Physiology** in **University of Chicago**
- ✓ Ph.D. in **University of California, Davis and San Diego**
- ✓ ~45 publications



**Chen Chen, Ph.D.**

- ✓ Former CEO and Director in **Sundia MediTech** Distinguished Scientist in **Neurocrine Biosciences** . Expertise in **G protein coupled receptors**
- ✓ Postdoctoral Research Fellow, Department of Chemistry, **Texas A&M University**
- ✓ ~110 publications and co-invented **24** US patents/patent applications

# 3

## Incubation and Investment (cont'd)

--Keep exploring promising biotech startups worldwide



- Cancers
- Metabolic and cardiovascular diseases
- Eye diseases and Dermatology
- Anti-infectious
- Analgesics
- Neurologics
- Others

2014-2018



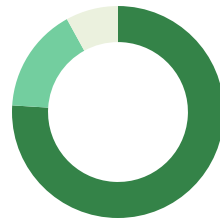
- US
- China
- Other



- Small Molecule
- Macro Molecule
- Other

2019

Another **15** startups are expected to be added in 2019H2



- First in Class
- MeToo/MeBetter
- Other

2020-2021

Plan to invest/incubate another **35** startups in 2020 and **50** startups in 2021, achieving total portfolio number to **137**; Average investment or in-kind service per project is around **1.5 million USD**, while average service period is about **2 years**

# 3 Incubation and Investment (cont'd)

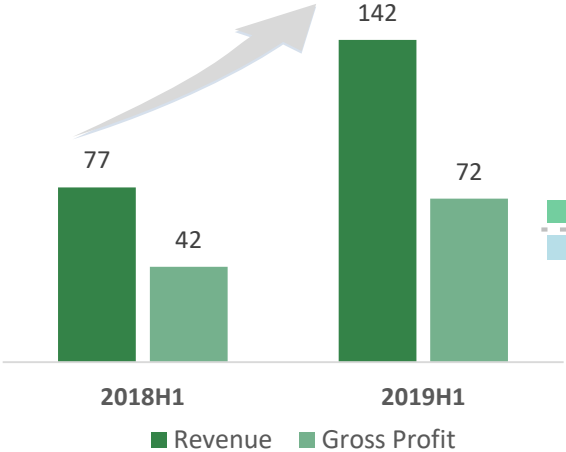
## --Newly increased incubation portfolio companies

	Type	Project Name	Indications/Primary Technology/Business	Time of Investment/incubation	Shareholding % to be received under agreement	Shareholding % held	Stage of Entry	Current Stage of Funding
1	EFS	ABM (Cayman)	Therapy for the treatment of brain cancers and various related cancers	2019.01	4.87%	4.87%	Seed	Seed
2	EFS	Versachem (US)	First-in-class small molecule drug therapeutic for acute and recent Spinal Cord Injury(SCI)	2019.05	23.17%	23.17%	Seed	Seed
3	EFS	Proviva (Cayman)	A pro-cytokine (Zitokine) fusion protein platform, for the treatment of cancer and infectious diseases	2019.06	35%	10.95%	Seed	Pre-A
4	EFS	Panacea (Cayman)	Developing innovative ferroptosis inducer drugs with novel structures for sensitization/combination of anticancer drugs	2019.06	29.47%	0.00%	Seed	Seed
5	EFS (CB)	Forkhead (US)	Treating insulin-dependent diabetes by restoring normal insulin production, and normalizing glucose metabolism	2019.01	To be determined pursuant to the terms of the convertible notes	0.00%	Seed	Seed
6	EFS (CB)	Bright Angel (Canada)	Focusing on tackling the problem of resistance to current antifungal therapies via the development of new drugs for infectious diseases	2019.06	To be determined pursuant to the terms of the convertible notes	0.00%	Seed	Seed
7	EFS (CB)	Mebias (Cayman)	Developing a platform to discover novel biased GPCR drugs with an improved therapeutic index	2019.06	To be determined pursuant to the terms of the convertible notes	5.23%	Seed	pre-A
8	SI (CB)	Totient (US)	focusing on drug discovery in immuno-oncology, enabled by a better understanding of cancer as a diverse array related diseases	2019.03	To be determined pursuant to the terms of the convertible notes	0.00%	Seed	pre-A
9	SI (CB)	AcuraStem (US)	First-in-class drug discovery to cure Neurodegenerative Diseases including ALS and FTD	2019.06	To be determined pursuant to the terms of the convertible notes	0.00%	Seed	Seed
10	SI	Mediar (US)	Develop best and first-in-class medicines for patient with organic fibrosis	2019.01	15.88%	15.88%	Seed	Seed

# 03 Financial Analysis

# Rapid Revenue Growth

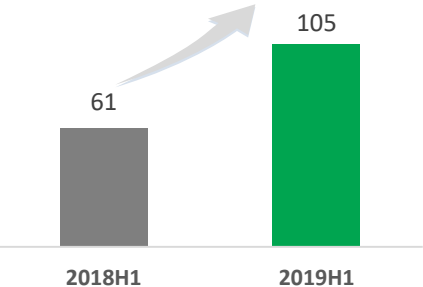
Total Revenue increased **84% YOY**



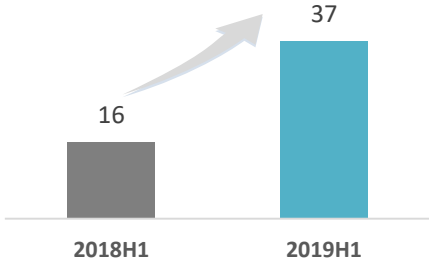
Increase of customer orders

Increase of incubation services

CFS revenue increased **72% YOY**



EFS revenue increased **129% YOY**



Gross Margin

54.6%

50.5%

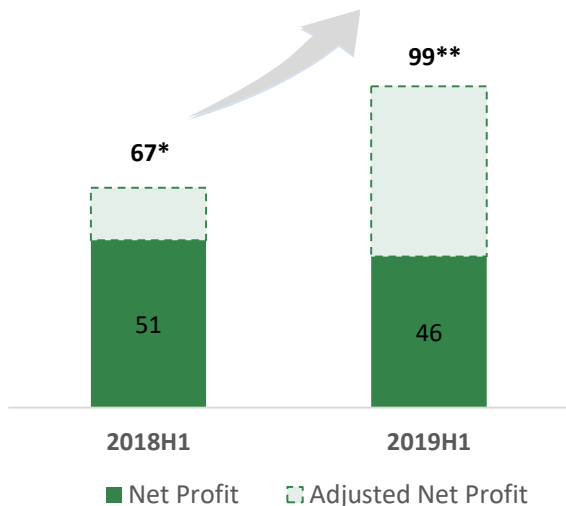
CFS-EFS %





# Outstanding Growth for Net Profit

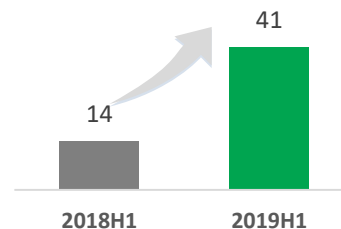
Net Profit increased **47% YOY**



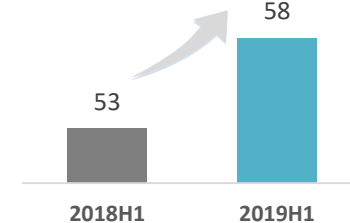
Profit from CFS and EFS

千人民币	2018H1	2019H1
Adjusted Net Profit	66,931*	98,643**
Profit from EFS ***	<b>52,819</b>	<b>58,060</b>
FVTPL Gain	41,464	48,168
Deemed Disposal Gain	11,355	9,892
Profit from CFS	<b>14,112</b>	<b>40,583</b>

CFS Profit increased **188% YOY**



EFS Profit increased **10% YOY**



Note: \* 2018H1 net profit of 67mn RMB has adjusted the one-time-cost preference share financial liabilities (4.5mn RMB) and listing fee (11.6mn RMB);  
 \*\* 2019H1 net profit of 99mn RMB has adjusted the one-time-cost preference share financial liabilities (34.2mn RMB) and listing fee (17.9mn RMB);  
 \*\*\* The EFS profit is calculated based on fair value gain on financial assets fair value through profit or loss and other gains and losses relating to incubation business.

# Maximize the Interest of Shareholder

Apart from the emphasis on business development, the management also pays close attention to investors' short-term and long-term returns. The interests of shareholders will be ensured to a certain extent through **STABLE DIVIDEND POLICY** and **TIMELY SHARE REPURCHASE**:

## Dividend



The Board decided to distribute to our shareholders up to **30%** of distributable profit (excluding unrealized FVG) every year. Based on the interim results, company decided to pay a cash dividend of 0.5 cent HKD per share, which is more than **7.2mn RMB**

## Repurchase



The company will also actively repurchase issued shares and continue to boost market confidence. As of the announcement date, a total of **7,628,000 ordinary shares** were repurchased with a total consideration of approximately **28.1mn RMB**

# 04 Future Strategies

# Future Strategies

## --Further optimize our innovative business model

World-leading structure-based technologies that enable us to stand at the gateway for first-in-class drug discovery

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Innovative and unique business model to tap into vast pharmaceutical market

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Integrated drug discovery platform attracting top scientists and talents worldwide

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Systematic incubation program to capture the highest return of the biotechnology value chain

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Growing ecosystem open to global industry participants

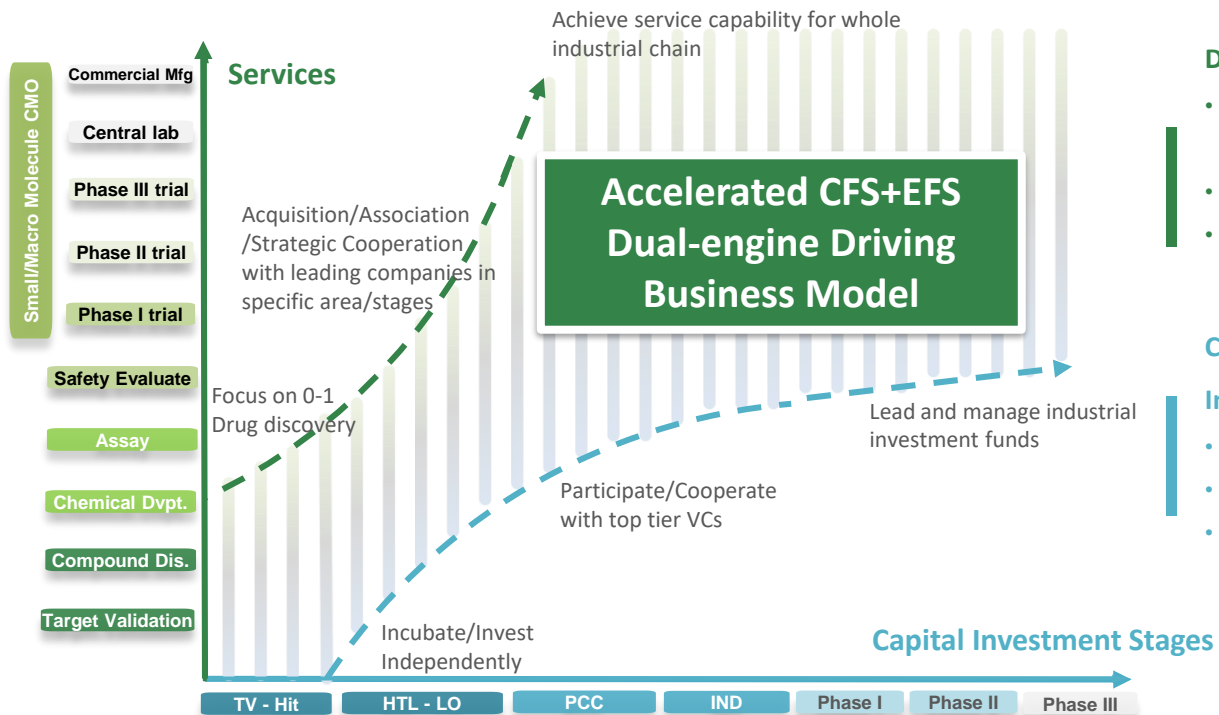
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The cradle for  
innovative  
biotechnology  
companies

# Future Strategies

--“Service + Capital” layout alongside the industry chain integration



## Downstream Derivation along industry value chain:

- Collaborate with top players specializing in respective areas/stages along the value chain
- Avoid heavy capital and time investment
- Rapidly build up capability to provide high quality and omni-industrial services

## Continuously Expand the Scope and Depth of Industrial Capital Investment:

- Cooperate with multiple top tier VCs in early stage
- Participant in funding, research or investment
- Set up Viva's own industrial investment fund and lead to invest drug discovery companies/projects in later stage



**Thank You!**