409A VALUATION

Per share Fair Value of {{SECURITY}} of {{COMPANY_NAME}} in connection with the requirements of Internal Revenue Code Section 409A as of {{VALUATION_DATE}}

{{COMPANY_NAME}}

PREPARED BY VALUE8.AI



{409A Valuation for {{COMPANY_NAME}}}

```
{{DESIGNEE_FIRST_NAME}} {{DESIGNEE_LAST_NAME}}

{{COMPANY_NAME}}

Dear {{DESIGNEE_ PREFIX}} {{DESIGNEE_ LAST_NAME}},
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At the request of {{COMPANY_NAME}} ("Company"), Value8 ("Value8") estimated the fair value of the Company's {{SECURITY}} (the "Subject Security"), as of {{VALUATION_DATE}} ("Valuation Date") on a non-controlling, non-marketable basis ("Engagement"). Our analysis was prepared solely for the information and use of Company's management ("Management"). Our engagement is limited solely to performing this valuation, in accordance with our terms and conditions in Exhibit A of our letter of engagement dated {{ENGAGEMENT_LETTER_DATE}}. While Management may use the results of this valuation for financial and/or tax reporting purposes including Internal Revenue Code Section 409A ("IRC 409A") and FASB Accounting Standards Codification Topic 718 – Stock Compensation ("ASC 718"), Value8 does not assume any liability in furnishing this estimation and opinion.

DEFINITION OF VALUE

The standard of value we applied in this opinion is fair value. The term "fair value" is defined per Accounting Standards Codification Topic 820, Fair Value Measurements:

...the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

For tax planning purposes, the definition of fair market value is predicated on IRS Revenue Ruling 59-60, which is defined as the price at which an asset would change hands between a willing and informed purchaser that are both operating under their own free will.

We are not aware of any facts that would cause a difference in our conclusions on a fair market value basis compared with fair value. As such, it is not unreasonable that our conclusion of fair value for financial reporting purposes ought to be consistent with fair market value for tax reporting purposes.

CONCLUSION

Based on the assumptions and limiting conditions as described in this report, as well as the facts and circumstances as of the Valuation Date, Value8 estimated the fair market value of the Company's Ordinary Shares to be approximately {{FMV}} per share as of the Valuation Date, on a non-marketable, minority-interest basis.

Sincerely,

Value8





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SOURCES OF INFORMATION

During the development of this valuation, Value8 relied on information provided by the Company's Management and/or information acquired from publicly available sources. In addition, some of Value8 assumptions and conclusions were based on reasonable projections pertaining to future events and/or future financial performances. Consequently, actual and/or future events or results may differ significantly.

The principal information sources used in performing this analysis included:

- Discussions and correspondence with the Company Management;
- Company historical financials and performance as of the Valuation Date;
- Company projections;
- The Company's capitalization table (as of the Valuation Date);
- Company marketing, investment, and business development related materials;
- Industry research and data pertaining to the financial performance, value, and future outlook of the Company;
- General market data that could affect the financial performance, value, and future outlook of the Company and;
- Publicly available information (including financial data) for existing companies that were regarded, in some useful manner, as comparable to the Company.

Value8 inherently depended on the completeness and accuracy of the information described above. While Value8 did not conduct an independent verification of any information obtained from the Company or other publicly published sources, the information appears to be consistent with current standards of reliability and completeness.



















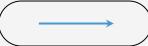


STATEMENT OF LIMITING CONDITIONS

The value conclusions specified in our appraisal report (the "Analysis") are governed by the following limiting conditions:

- Value8 has based this Analysis on information provided and represented by the management of the Company. This information included the state of product development, the financial history, future business plans, as well as information with respect to the capital structure and past financings.
- Company management warranted to Value8 that the information supplied was complete and correct to the best of its knowledge. Value8 did not independently verify the information, and, in that regard, the validity of the Analysis depends on the completeness and accuracy of the information provided to Value8 by the Company.
- Value8 has relied upon information furnished by others, which is believed to be reliable. We have not independently verified the accuracy or completeness of the information.
- The value conclusions are not intended to represent values for the Company's securities at any date other than the Valuation Date in the Analysis.
- We assume no responsibility for changes in market conditions or physical factors that could affect the value of the Company's securities at a later date, or the inability of the owner to sell the Company's securities at the value specified in the Analysis.
- The Analysis has been prepared solely for the purpose stated and should not be used for any other purpose or by any other person/party than to or for whom it is addressed and prepared. Our value conclusions are not intended to represent investment advice of any kind and do not constitute a recommendation as to the purchase price or sale of the Subject Security.
- Neither the Analysis nor any portion thereof (including, without limitations, any conclusions as to value, the identity of the appraiser, or the identity of Value8) shall be disseminated to the public or third parties through advertising, public relations, news, sales, mail, direct transmittal, Securities and Exchange Commission disclosure documents, or any other media without the prior written consent and approval of Value8. Possession of the Analysis, or a copy thereof, does not afford the holder the right to publication. The Analysis may not be used without the prior written consent of Value8 and the Company.
- o Our fee for this service is not contingent upon the results of the Analysis expressed herein.



















APPRAISAL CERTIFICATION

We certify that, to the best of our knowledge and belief:

- The statements of fact contained in this report are true and correct.
- o The reported analyses, opinions, and conclusions are limited only by the assumptions and limiting conditions contained herein, and are my personal, unbiased professional analyses, opinions, and conclusions.
- o I have no present or prospective interest in the property that is the subject of this report, and no personal interest or bias with respect to the parties involved. I am not aware of any such interest held by Bridgeland Advisors or any of the individuals involved in this appraisal.
- o Our engagement or compensation is not contingent on an action or event resulting from the analyses, opinions, or conclusions in, or the use of, this report.
- o Our analyses, opinions, and conclusions were developed, and the report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice.
- The conclusion of value is based solely on work performed by us or by individuals working under our direction.

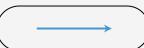
{{REPORT_DATE}}

Value8

Appraiser:

{{APPRAISER_FIRST_NAME}} {{APPRAISER_LAST_NAME}} ; {{APPRAISER_TITLE}}











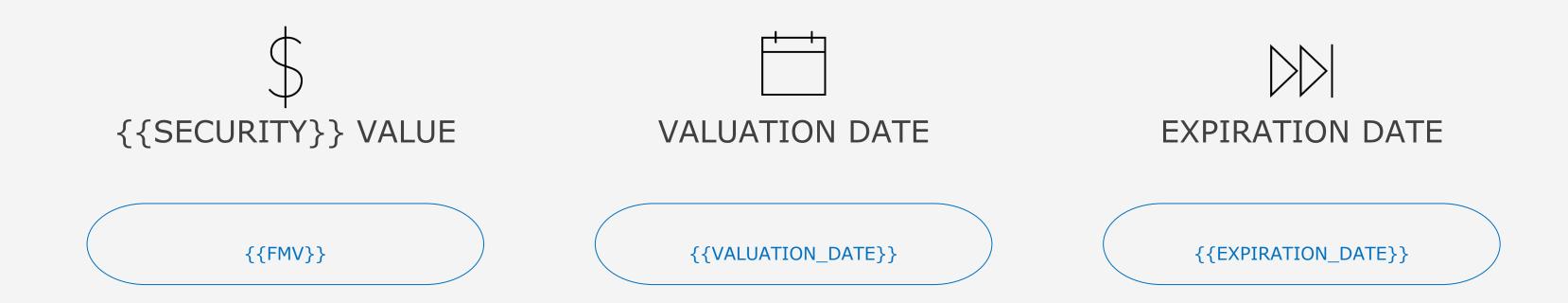








SUMMARY VALUATION RESULTS

















COMPANY OVERVIEW



BUSINESS DESCRIPTION

About: {{BUSINESS_DESCRIPTION}}

Founded: The company was founded in

{{INCORPORATION_YEAR}}

Headquarters: {{HEADQUARTERS}}

Business model: {{BUSINESS_MODEL_DESCRIPTION}}

MARKET FOCUS

{{MARKET_DESCRIPTION}}

△ STAGE OF DEVELOPMENT

The American Institute of Certified Public Accountants

(AICPA) defines six stages of enterprise development. In this hierarchy, Value8 categorizes the Company as a
{{STAGE_OF_DEVELOPMENT}} company.

{{STAGE_OF_DEVELOPMENT_DESCRIPTION}}



PRODUCTS

{{PRODUCTS}}



MANAGEMENT TEAM

{{MGMT_TEAM_NAME_1}}, {{MGMT_TEAM_TITLE_1}}

{{MGMT_TEAM_NAME_2}}, {{MGMT_TEAM_TITLE_2}}

{{MGMT_TEAM_NAME_2}}, {{MGMT_TEAM_TITLE_3}}

{{MGMT_TEAM_NAME_2}}, {{MGMT_TEAM_TITLE_4}}



LEADING INVESTORS

{{INVESTOR_1}}
{{INVESTOR_2}}
{{INVESTOR_3}}
{{INVESTOR_4}}





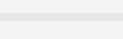










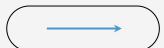




CAPITAL STRUCTURE AND FINANCING HISTORY

SHARES AND ROUND INFOMRATION	SHARES	OPTIONS	WARRANTS	TOTAL OUTSTANDING	TOTAL FULLY DILUTED	% FD
Series D Shares	1,000,000		5,000	1,000,000	1,050,000	33.25%
Series C Shares	1,000,000			1,000,000	0	33.25%
Series B Shares	1,000,000			1,000,000	1,000,000	33.25%
Series A Shares	1,000,000			1,000,000	1,000,000	33.25%
Ordinary Shares	1,000,000	500,000		1,000,000	1,500,000	33.25%



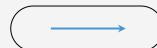




RIGHTS AND PREFERENCES

RIGHTS AND PREFERENCES	OIP	TYPE	MULTIPLIER	CAP	CONVERSION RATIO	LIQUIDATION RANK
Series D Shares	\$1.55	Participating	1x	3x	1x	1
Series C Shares	\$1.55	Non-Participating	1x	N/A	1x	2
Series B Shares	\$1.55	Non-Participating	1x	N/A	1x	2
Series A Shares	\$1.55	Non-Participating	1x	N/A	1x	3
Ordinary Shares	-	N/A	N/A	N/A	N/A	4













Allocation of Value



VALUATION METHODOLOGY & APPROACHES

VALUATION METHODOLOGY

In order to arrive at the FMV of a company's Ordinary Shares, Bridgeland Advisors employs a top-down valuation strategy which involves two steps:

- o First, determining the value the enterprise utilizing one or more relevant and applicable valuation approaches.
- Second, allocating that value through the capital structure utilizing one or more relevant and applicable allocation methods.

VALUATION APPROACHES

While there are many different possible techniques to arrive at the value of a company – many of which are company, industry, or situation-specific – the principles of business valuations are typically applied by using three general valuation approaches:

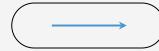
THE INCOME APPROACH:

- The income approach forecasts and measures the future anticipated income that a business can generate and quantifies the present value of such income. This approach requires analyses of variables that drive income, such as revenues, operating expenses and taxes. Application of this approach is usually done by a Discounted Cash Flow (DCF) analysis or Capitalization of Cash Flow (CCF).
- Methods used to valuate a company's future cash flow capacity include single period forecasting and multi period forecasting with the aim to estimate the cash flows for as many discrete future periods as needed to obtain a "stabilized" cash flow level of the company.

THE MARKET APPROACH:

The market approach aims to determine the value of a business by extracting prices and other relevant information generated by market transactions involving comparable businesses. The resulting information is then applied to the relevant financial metrics of the subject company. The market approach derives value based on the value implied by these other similar enterprises or transactions. Within this approach, Bridgeland Advisors considers three valuation methods:





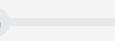








Allocation of Value





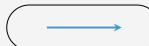
VALUATION METHODOLOGY & APPROACHES

- 1. Guideline public company method. Relevant market multiples from the guideline comparable public companies are developed using metrics such as revenue and earnings before interest, taxes, depreciation and amortization (EBITDA).
- 2. Guideline precedent transactions method. The guideline company transactions method uses actual prices paid in merger and acquisition transactions for companies similar to the Company to determine an exit multiple.
- 3. OPM Backsolve method. Considered the most dependable indicator of current market value since it benchmarks the original issue price (OIP) of the company in its most recent round of financing. This is based on the premise that sophisticated financial investors conducted comprehensive due diligence and conducted rational negotiations which inherently make this OIP a fair market value. The backsolve method requires considering the rights and preferences of each class of equity and the use of an option pricing model to solve for the total equity value that produces per share values consistent with a recent transaction the company's own securities. As such, the model solves for the per share value of the security placed in the transaction and consequently produces relative values for other securities in the company's capital structure.

THE ASSETS APPROACH:

The asset-based approach encompasses a set of methods that value the company by reference to its balance sheet. In contrast, income approach and market approach valuation methods primarily focus on the company's income statement and/or cash flow statement. The goal of this approach is to value (and not the recorded balance of) all of the assets and liabilities of the subject company. Application of this the asset-based approach is based on the expected sale price or the replacement cost of the subject asset over a defined period of time, between some defined parties. For these reasons, the net/underlying assets method is typically used when determining the value of capital-intensive businesses or holding companies.











Allocation of Value





ALLOCATION OF VALUE TO CAPITAL STRUCTURE

According to the AICPA Guide(*), the methods for allocating equity value are traditionally grouped into four categories: the probability-weighted expected return method (PWERM), the option-pricing method (OPM), the current-value method (CVM), and the hybrid method:

PROBABILITY WEIGHTED EXPECTED RETURNS METHOD ("PWERM"):

Scenario-based methods consider the payoff to each class of equity based on a range of exit scenarios that then may be discounted back to the valuation date. A simplified scenario analysis is based on a post-money value of the company on a pro rata basis assuming all classes of equity are converted. This analysis can be suitable for situations where a company will either be successful or there will be limited value to distribute if unsuccessful. A relative value scenario analysis will consider the estimated pro rata share of the various equity interests and then calibrate a post-money value by applying probabilities to different outcomes and payoff values. This approach typically ignores discounting. A full scenario analysis (PWERM) estimates the value of the different classes of equity interests by analyzing potential future values, based on different outcomes (generally IPO, sale, dissolution). The future values for each equity class are discounted back based on the required return for each class considering potential dilution from future financings. A PWERM approach is more typically used when a company is closer to an exit and different potential outcomes can be more readily ascertained.

THE OPTION PRICING METHOD ("OPM"):

- The OPM model treats Ordinary and Preferred Shares as call options on the enterprise's equity value, with exercise prices based on the liquidation preferences of the preferred stock. Under this method, the Ordinary Shares has value only if the funds available for distribution to shareholders exceed the value of the liquidation preferences at the time of a liquidity event (e.g., a merger, sale or IPO), assuming the company has funds available to make a liquidation preference meaningful and collectible by the shareholders.
- The Ordinary Shares are modeled as a call option that gives its owner the right, but not the obligation, to buy the underlying equity value at a predetermined or exercise price. Thus, Ordinary Shares are considered to be a call option with a claim on the equity at an exercise price equal to the remaining value immediately after the preferred stock is liquidated. The OPM begins with the current equity or enterprise value and estimates the future distribution of outcomes using a lognormal distribution around that current value. A key limitation of the OPM is the assumption of a lognormal distribution based on the subjective assumptions of volatility and term until exit. Additionally, holders of the preferred stock may have influence on the timing of an exit if the company is performing above or below initial expectations.



(*) Valuation of Privately-Held-Company Equity Securities Issued as Compensation - Accounting and Valuation Guide





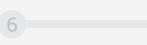














ALLOCATION OF VALUE TO CAPITAL STRUCTURE

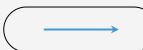
THE CURRENT VALUE METHOD ("CVM"):

- The CVM estimates the value of various classes of equity by allocating the current total equity value on a controlling basis, assuming an immediate sale of the company. The fundamental assumption of the CVM is that each class of stockholders will exercise its rights and achieve its return based on the enterprise value as of the valuation date, rather than at some future date.
- While this methodology is easy to apply, for purposes of valuing an equity interest it may be limited because it does not capture any of the option value for certain classes of equity. As such, this methodology is most appropriate when a liquidity event is imminent and when a company has sufficient elements of control over the timing of the exit..

THE HYBRID METHOD:

The hybrid method, a combination of the PWERM and OPM, can be appropriate when there are expectations of a near-term liquidity event with a high probability; yet if the transaction is not consummated, the alternate path for the company is more uncertain, with a potential exit further out in the future. The PWERM component would apply the probabilities associated with a range of values for the near-term liquidity event to determine one component of the estimated value and the remaining probability would use an OPM over a more extended period. Conceptually, the hybrid method provides a good framework for valuation as it captures both expectations of different future values and potential optionality of certain equity classes; however, it can be complex to develop considering the numerous assumptions needed.





Valuation Analysis

SELECTED VALUATION METHODOLOGIES

METHOD	DESCRIPTION	DESCISION	N & WEIGH
Market Approach – OPM Backsolve	According to the AICPA guidelines, recent securities transactions should be considered as a relevant input for computing the enterprise valuation. The primary advantage of this method is that it establishes a value for equity compensation based on the support of the latest round of financing or transaction. Given that the most recent financing round was very recently ({{LAST_ROUND_DATE}}), we chose to utilize the backsolve method. After consideration a weight of 100% was selected.		100%
Market Approach – Public comperables	The basic premise of the comparables approach is that an equity's value should bear some resemblance to other equities in a similar class. In the case of the Company, it has a very unique product in a very new industry which makes it particularly difficult to establish an appropriate peer group. Due to substantial difference (relative to peer group) in size and stage of development of the Company, this methodology was considered and not used, as it does not accurately represent the going concern value of the subject Company.	X	0%
Income Approach	DCF method allows us to consider explicitly the potential growth prospects and future cash flow streams. The Income Approach is the most informative valuation methodology, however it is not always suitable for early-stage companies where revenue projections have no historical basis, are often too speculative or otherwise unreliable to be relied upon for this valuation methodology. Based on the Company's stage of development, lack of operating history, and the great level of variability surrounding its innovative product and therefore long-term forecast, we did not consider the Income Approach in this analysis for the Company.	×	0%
Asset Approach	The Company is not a capital-intensive business. We therefore concluded that other valuation approaches would better capture the fair market value than would the Asset Approach. Consequently, this methodology was considered and not used, as it does not accurately represent the going concern value of the subject Company.	X	0%
15			



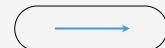




WEIGHTING OF VALUATION METHODOLOGIES

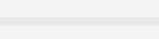
VALUATION APPROACH	DECISION	ENTERPRISE VALUE	WEIGHTING	WEIGHTED VALUE
MARKET APPROACH				
Subject Company Transaction (OPM Backsolve)	{{DECISION}}		{{BACKSOLVE_WEIGHT}}	{{BACKSOLVE_EQUITY_VALUE}}x{{BA CKSOLVE_WEIGHT}}
Guideline Public Comperables	{{DECISION}}		{{PUBLIC_COMPS_WEIGHT}}	
Guideline Precedent Acquisitions	{{DECISION}}		{{PREAQUS_WEIGHT}}	
INCOME APPROACH				
Discounted Cash Flow	{{DECISION}}		{{DCF_WEIGHT}}	
ASSET APPROACH				
Cost to Recreate	{{DECISION}}		{{CTR_WEIGHT}}	
WEIGHTED ENTERISE VALUE				
LESS: NET DEBT				{{NET_DEBT}}
WEIGHTED EQUITY VALUE			{{VALUATION_WEIGHTING_TOTAL}}	{{WEIGHTED_EQUITY_VALUE}}











Allocation of Value



APPLICATION OF THE OPM BACKSOLVE APPROACH

EQUITY VALUE CALCULATION METHODOLOGY

As noted above, this analysis considers the {{LAST_ROUND_SECURITY}} transaction closed on ({{LAST_ROUND_DATE}}, specifically the price per share paid in exchange for each share of {{LAST_ROUND_SECURITY}}. To determine the implied equity value from the transacted price, we used the Black Scholes OPM to allocate value to the various share classes such that the probability weighted {{LAST_ROUND_SECURITY}} per share value equals its Original Issued Price.

For the purposes of determining company value with a Black-Scholes OPM, five key inputs are required:

SUMMARY BACKSOLVE INPUTS	DESCRIPTION	VALUE
Equity value (spot price)	Total consideration of the most recent transaction – we backsolved to an equity value that results in a value per share for the {{LAST_ROUND_SECURITY}} of \${{LAST_ROUND_PPS}}	{{BACKSOLVE_EQUITY_ VALUE}}
Volatility	Volatility - expected volatility, over the estimated terms, was estimated based upon an analysis of the historical volatility of guideline public companies in the {{VOLATILITY_INDUSTRY }} in {{VOLATILITY_GEOGRAPHY}}, as performed by {{VOLATILITY_SOURCE}}	{{VOLATILITY}}
Time to Liquidity Event (Years)	An estimate for when liquidity will be achieved, either through dissolution, strategic sale, or IPO, reasonably estimated by reference to the subject Company's life cycle stage, funding needs, and strategic outlook	{{OPM_TIME_TO_LIQUID ITY}}
Risk Free Interest Rate	A risk-free rate was applied which represents the US Treasury rate as of the Valuation Date. The risk free rate used is the constant maturity US Treasury rate corresponding to the applicable time to liquidity	{{OPM_RISK_FREE_RAT E}}
Equity breakpoint value (strike price)	The rights and preferences of the various classes were used to calculate breakpoints. A breakpoint is the point at which each class of equity reaches in-the-money status. The value in excess of any given breakpoint is equal to a call option on the total equity value of the Company	See page 12











Allocation of Value





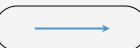
WEIGHTING OF ALLOCATION METHODOLOGIES

VALUATION APPROACH	DECISION	WEIGHTING	{{SECURITY}} VALUE PER SHARE
ОРМ	{{DECISION}}	{{OPM_WEIGHT}}	{{FMV}}
PWERM	{{DECISION}}	{{PWERM_WEIGHT}}	NA
CVM	{{DECISION}}	{{CVM_WEIGHT}}	NA
Hybrid	{{DECISION}}	{{HYBRID_WEIGHT}}	NA
IMPLIED {{SECURITY}} SHARE VALUE		{{ALLOCATION_WEIGHTING_T L}}	OTA {{FMV}}

Conclusion

Our recommended Fair Value, as of the Valuation Date, per share of Ordinary Shares on a non-marketable basis is \${{FMV}}







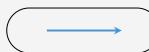
Allocation of Value

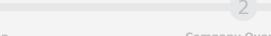


BLACK-SCHOLES OPM ASSUMPTIONS								
Underlying Asset Value Exercise Price Expected Volatility Risk-Free Rate Time to Liquidity (years)								
{{BACKSOLVE_EQUITY_VALUE}}	{{BACKSOLVE_EQUITY_VALUE}}	{{VOLATILITY}}	{{OPM_RISK_FREE_RATE}}	{{OPM_TIME_TO_LIQUIDITY}}				

	BREAKPOINTS ANALYSIS										
Breakpoint	Event Description	From	То	D1	D2	Call Option Value	Incremental Call Value				
BP1	Liquidation Preference										
BP2	OS participate										
BP3	Options @1.4 exercise										
BP4											
BP5											
BP6											
BP7											
BP8											
BP9											
BP10											
BP11											
BP12											
BP13											
BP14											
End											









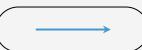






				BRE	AKPOINTS PAR	TICIPATION %				
Breakpoint	Ordinary Shares (including options)	Series A	Series B	Series C	Series D	Series E	Series F	Series G	Series H	Total
BP1		27%	15%	18%	3%	7%	20%	5%	5%	100%
BP2	100%									100%
BP3										100%
BP4										100%
BP5										100%
BP6										100%
BP7										100%
BP8										100%
BP9										100%
BP10										100%
BP11										100%
BP12										100%
BP13										100%
BP14										100%
End										100%



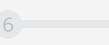






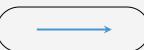






				ALLOCATION	OF INCREMENT	AL OPTION VAL	.UE			
Breakpoint	Ordinary Shares (including options)	Series A	Series B	Series C	Series D	Series E	Series F	Series G	Series H	Total
BP1										
BP2										
BP3										
BP4										
BP5										
BP6										
BP7										
BP8										
BP9										
BP10										
BP11										
BP12										
BP13										
BP14										
End										









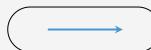






	ALLOCATION OF INCREMENTAL OPTION VALUE										
	Ordinary Shares (including options)	Series A	Series B	Series C	Series D	Series E	Series F	Series G	Series H	Total	
# of Shares											
Value / Share	{{FMV_PRE_ DLOM}}										
Discount	{{COCLUDE D_DLOM}}										
FMV	{{FMV}}										

23



Allocation of Value



OPM BREAKPOINT ANALYSIS

BREAKPOINT	EVENT DESCRIPTION	PARTICIPATING CLASSES	FROM	то	SHARE COUNT
[1]	{{BREAKPOINT_1_DESCRIPTION}}	{{BREAKPOINT_1_CLASSES}}	{{BREAKPOINT_1_FROM}}	{{BREAKPOINT_1_ TO}}	{{BREAKPOINT_1 _SC}
[2]	{{BREAKPOINT_2_DESCRIPTION}}	{{BREAKPOINT_2_CLASSES}}	{{BREAKPOINT_2_FROM}}	{{BREAKPOINT_2_ TO}}	{{BREAKPOINT_2 _SC}
[3]	{{BREAKPOINT_3_DESCRIPTION}}	{{BREAKPOINT_3_CLASSES}}	{{BREAKPOINT_3_FROM}}	{{BREAKPOINT_3_ TO}}	{{BREAKPOINT_3 _SC}
[4]	{{BREAKPOINT_4_DESCRIPTION}}	{{BREAKPOINT_4_CLASSES}}	{{BREAKPOINT_4_FROM}}	{{BREAKPOINT_4_ TO}}	{{BREAKPOINT_4 _SC}
[5]	{{BREAKPOINT_5_DESCRIPTION}}	{{BREAKPOINT_5_CLASSES}}	{{BREAKPOINT_5_FROM}}	{{BREAKPOINT_5_ TO}}	{{BREAKPOINT_5 _SC}











DISCOUNT FOR LACK OF MARKETABILITY (QUANTITATIVE)

DISCOUNT FOR LACK OF MARKETABILITY (QUANTITATIVE)					
DLOM INPUTS					
Equity Value (Spot Price)	{{WEIGHTED_EQUITY_VALUE}}				
Strike Price	{{WEIGHTED_EQUITY_VALUE}}				
Risk Free Rate	{{OPM_RISK_FREE_RATE}}	{{OPM_RISK_FREE_RATE}}			
Volatility	[[VOLATILITY]]				
Time to Liquidity (Years)	{{OPM_TIME_TO_LIQUIDITY}}	{{OPM_TIME_TO_LIQUIDITY}}			
DLOM METHODOLOGY	WEIGHT	DLOM ARRIVED			
The Chaffe Protective Put Model	{{CHAFFE_WEIGHT}}	{{CHAFFE_DLOM}}			
Finnerty Average Strike 2012 Model	{{FINNERTY_WEIGHT}}	{{FINNERTY_DLOM}}			
Ghaidarov Average Strike Model	{{GHAIDAROV_WEIGHT}}	{{GHAIDAROV_DLOM}}			
Longstaff Lookback Put Option	{{LONGSTAFF_WEIGHT}}	{{LONGSTAFF_DLOM}}			
DLOM - FMV Restricted Stock Studies	{{MARKET_STUDIES_WEIGHT}}	{{MARKET_STUDIES_DLOM}}			
CONCLUDED DLOM		{{CONCLUDED_DLOM}}			







Valuation

Framework









DISCOUNT FOR LACK OF MARKETABILITY (EMPIRICAL)

Empirical studies were also used to gauge the reasonableness of the put option model results. This table adds studies across various contexts, methodologies, and tax scenarios, aiming to give a wider perspective on DLOM ranges for private companies. Higher DLOMs were observed for companies with high volatility in their financial performance or operating environment, and with longer time horizon for a liquidity event. Ultimately the appropriate discount depends on specific circumstances and a qualified appraiser's judgment.

STUDY	CONTEXT	METHODOLOGY	DISCOUNT RANGE	AVERAGE DISCOUNT
BVR DLOM Survey (2023)	Transaction data	Multiple valuation approaches	20.4% - 40.5%	30%
SEC Private Placement Study (2015)	Restricted stock sales	Comparison to publicly traded counterparts	15% - 35%	24%
Copeland et al. (2022)	Estate tax	Regression analysis of transaction data	15% - 45%	30%
Pratt et al. (2021)	Litigation damage calculation	Option pricing model	10% - 30%	20%
Duff & Phelps (2023)	Gift tax	Appraisal guidelines & market data	20% - 50%	35%
Ibbotson Associates (2023)	Private vs. public equity return comparison	Historical rate of return data	10% - 35%	25%
Johnson/Park Empirical Method	Various (tax, litigation, transaction)	Statistical analysis of transaction & market data	20% - 40%	32%
Chaffe (1993)	Valuation of restricted stock	Put option pricing	15% - 45%	30%
IRS Revenue Ruling 77-287	Estate tax valuation guidelines	Consideration of control rights & marketability	20% - 50%	35%















APPRAISER BIO AND CREDENTIALS

{{APPRAISER_BIO}}







