

Capitalisation Table *Part II:* A Working Case Study

Private Capital Insights



1. INTRODUCTION

In Part 1, we explained the building blocks of a capitalisation table: shares, contingent equity instruments, valuation mechanics, dilution, and liquidation preferences. This second edition animates these concepts through a working case study for a health tech startup.

Delta Health Limited is a fictional Nigerian health tech startup co-founded by Ade (CEO) and Bala (CTO). Their first institutional investor is Alpha Capital. We have therefore built the cap table incrementally across four key stages: (a) incorporation, (b) a pre-seed convertible note (c) a Seed equity round and (d) a sale exit. At each stage, we update the cap table, showing the mathematics behind each transaction and the implication for stakeholders.

2. INCORPORATION

Ade and Bala incorporate Delta Health Limited with the Corporate Affairs Commission (CAC). At incorporation, both Ade and Bala subscribe for 500,000 units of ordinary shares at the nominal value of ₦1 per share.

Fig 1: Cap Table at Incorporation

Shareholder	Share Class	Units	% Ownership
Ade (CEO)	Ordinary	500,000	50%
Bala (CTO)	Ordinary	500,000	50%
Total		1,000,000	100%

At this stage, the cap table is pretty straightforward: it is as simple as it will ever be. This may change as the company matures further and seeks institutional capital and attracts great talents.

3. PRE-SEED FINANCING/CONVERTIBLE NOTES

Delta has developed a prototype hardware for detecting cancerous cells, which founders believe is far cheaper than the current market offerings. To further develop this product (Endo-X), Delta needs to hire one engineer and a product lead. It has entered discussions with an institutional investor (Alpha Capital), who is minded to inject capital through a convertible loan note.

Convertible Note Terms

The loan is structured as follows:

- *Principal: US\$ 200,000*
- *Interest rate: 6% p.a., accruing from drawdown date.*
- *Maturity date: 12 months from the date of the note.*
- *Conversion trigger: the next priced equity round.*
- *Conversion mechanics: 20% discount to the price per share in the next priced equity round (i.e., at a seed round for example, the principal and interest convert into seed preference shares at a discount of 20% of the seed price per share).*
- *Maturity Repayment: if no priced equity round occurs within the note term, then the outstanding principal and interest becomes repayable in cash, or Alpha's election, convertible into shares at a valuation to be agreed by parties.*

Recall that the cap table tracks both equity and contingent equity instruments issued by Delta. Therefore, Alpha will feature on the cap table because it has a claim against the future shares of Delta Health.

Fig 2: Cap Table tracking Convertible Note

Shareholder	Share Class	Units	Notes	% Ownership
Ade (CEO)	Ordinary	500,000		50%
Bala (CTO)	Ordinary	500,000		50%
Alpha Capital			\$200,000 @ 6% p.a. (convertible at Seed Round)	
Total		1,000,000		100%

It is worth noting that some convertible notes may convert (a) at a discount (like the example above) (b) at a valuation set in the notes, or (c) at either discount or valuation fixed in the notes, whichever results in a higher number of shares to the investors. If valuation is fixed in the notes, the calculation is different and it is therefore important to understand the conversion mechanics carefully.

4. SEED ROUND

Delta has developed Endo-X with excellent functionality. In fact, market research points to credible and growing demand from both individuals and primary health centers in the country. Delta now seeks a Seed round of approximately \$2m to establish product-market fit (i.e., acquiring its first cohort of paying customers, validating its pricing model, and building supporting infrastructure).

Deal terms for Seed Financing

Again, Alpha is happy to invest fresh equity on the following headline terms:

- *Pre-money valuation: \$8,000,000 (including an unallocated option pool representing 10% of the fully diluted post-money capitalisation)*
- *New Investment: \$2,000,000*
- *Post-money valuation: \$10,000,000*
- *Liquidation Preference: 1x non-participating*
- *Conversion: preferred converts to common on a 1:1 convertible basis, subject to standard anti-dilution adjustments.*

Accordingly, this will involve a three-stage calculation which is represented below.

A. Working Out Total Number of Shares (on a fully diluted basis)

First step is to set the total number of shares on a fully diluted basis (i.e., counting outstanding shares and contingent equity as if they've been converted). We represent this with X.

Then we calculate the **price per share**, which is key to calculating the number of shares the notes will convert to and Alpha will get for its new investment. This formula is set out below.

$$\text{Price Per Share} = \text{Post-money valuation } (\$10\text{m}) \div X$$

In light of this, each party will have the following shares:

- i. Alpha for its New Investment: 20% of X. This follows from the deal terms: Alpha's \$2,000,000 new investment $\div$ the \$10,000,000 post-money valuation = 20% of Delta Health Ltd on a fully diluted basis. This is therefore **0.20X**
- ii. Alpha for the Notes Conversion: First, we calculate amount outstanding on the notes, which formula is principal + (*principal* x *interest* x *year*). That is: \$200,000 + (\$200,000 x 0.06 x 1). This gives an outstanding amount of **\$212,000**.

Recall that the note is issued at a 20% discount and that, for simplicity, we assume the Seed round closes on the note's first anniversary (hence one full year of interest). Therefore, the discounted price which the Note will convert is 80% of PPS (i.e., PPS less the 20% discount).

$$0.80 \times (\$10,000,000 \div X) = 8,000,000 \div X.$$

*Amount the shares will convert into, therefore is 212,000 $\div$ (8,000,000 $\div$ X), which is **0.0265X***

- iii. ESOP: from the deal terms, we understand that the option pool is sized at 10% of X. This is therefore 0.10X

B. Tallying the Numbers.

The total share count therefore is as follows:

$$X = 1,000,000 \text{ (founder shares)} + 0.10X \text{ (ESOP)} + 0.20X \text{ (Alpha new shares)} + 0.0265X \text{ (Notes converting)}.$$

$$X - 0.10X - 0.20X - 0.0265X = 1,000,000$$

$$0.6735X = 1,000,000$$

Divide both sides by 0.6735 to get X

1,484,781 (rounded to the nearest share).

From our calculation, therefore, the total number of shares on a fully diluted basis is **1,484,781**.

C. Working Back the Calculation

With X known, we can now verify every formula in Stages A & B

- Price Per Share = Post-money valuation (\$10,000,000) ÷ Total Shares Outstanding (1,484,781) = \$6.735
- ESOP = 0.10 x 1,484,781 = 148,478 units
- Discounted Conversion Price = 0.8 x 6.735 = \$5.388
- Notes conversion: \$212,000 ÷ 5.388 = 39,347
- Alpha's new shares = \$2,000,000 ÷ \$6.735 = 296,956 (rounded to the nearest figure)

Accordingly, the cap table on a fully diluted basis is represented below. Percentages are rounded and may not sum exactly to 100%.

Fig 3: Cap Table – Post Seed

Shareholder	Share Class	Units	Ownership (%)	Notes
Ade (CEO)	Ordinary	500,000	33.67%	Diluted from 50%
Bala (CTO)	Ordinary	500,000	33.67%	Diluted from 50%
ESOP (ungranted)	Ordinary	148,478	10.00%	Pre-money dilution of shareholders only
Alpha Capital (Notes)	Preference	39,347	2.65%	20% disc to seed price
Alpha Capital Seed	Preference	296,956	20.00%	\$2m @ \$6.735/share
Total		1,484,781	100%	

5. EXIT

Three years down the line post-seed financing, Delta has hired new employees and granted 63,697 options pursuant to its ESOP plan. Filo Group (a large international conglomerate) indicated interest in, and made offer to acquire 100% of, Delta Health for \$12m.

Two points are worth observing:

- i. *the liquidation preference provision in the Notes & Seed documentation kicks in at Exit.*
- ii. *any ungranted option at the date of the agreement lapses. The reason is quite obvious: Delta's **existing shareholders** sell their shares to Filo Group, and not potential/future shareholders.*

Therefore, the first stage is to calculate the outstanding shares in Delta. 500,000 (Ade) + 500,000 (Bala) + Alpha (336,303, being 296,956 seed shares + 39,347 note shares) and Share Option Grant (63,697). This brings the outstanding shares to 1,400,000 units.

Next stage is to calculate the PPS at \$8.5714, which is key to determining whether Alpha takes the preference or not. Alpha's seed shares are worth \$2,545,338 on an as-converted basis — more than their \$2,000,000 preference — and its note shares \$337,260, more than their \$212,000 preference. Alpha will therefore elect to convert to ordinary shares rather than take its preferences. For simplicity, we ignore the exercise price payable on the granted options.

Fig 4: Cap Table at Exit

Shareholder	Units	Payout	Notes
Ade (CEO)	500,000	4,285,714	Diluted from 50%
Bala (CTO)	500,000	4,285,714	Diluted from 50%
Option pool (granted)	63,697	545,974	Granted options (ungranted pool lapsed)
Alpha Capital (Notes)	39,347	337,260	20% disc to seed price
Alpha Capital Seed	296,956	2,545,338	\$2m @ \$6.735/share

Total	1,400,000	12,000,000	
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The outcome would look very different had Filo Group offered, say, \$4m. In that case, the price per share would have been \$2.8571 (i.e., \$4m ÷ 1,400,000). On an as-converted basis, Alpha's seed shares would be worth only about \$848,000 (296,956 × \$2.8571) and its note shares about \$112,000, both well below their respective 1x liquidation preferences of \$2,000,000 and \$212,000.

Alpha would therefore **not** convert; it would take its preferences instead, receiving \$2,212,000 off the top before any other shareholder sees a kobo. The remaining \$1,788,000 would then be distributed among the ordinary shareholders (the founders and option holders) pro rata across their 1,063,697 shares.

6. CONCLUSION

While there are several resources out there to help founders build cap tables, we have sought to explain the mathematics behind the figures in a cap table. It is worth noting that our explanation is simpler than what you will meet in the real world, and the cautious step is to take expert advice

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