Independent Business Review, 11(1-2), 19-28, 2018
School of Business, (IUB) http://www.sb.iub.edu.bd/ibr

VALUATION OF STARTUP FIRMS: A CASE STUDY ON PATHAO

G. M. Wali Ullah[1], Farhan Mahtab[1], Samiul Parvez Ahmed[1] & Sarwar Uddin Ahmed[1]

[1]*Department of Finance, School of Business, Independent University, Bangladesh*

INTRODUCTION

With a population of 20 million, Dhaka, the capital of Bangladesh has become one of the busiest cities in the world. Traffic congestion, one of the most complicated and challenging problems, has been snowballing at an alarming rate in Dhaka city. The transportation issue has turned into unbearable and one of the burning concerns of the country. Bangladesh is one of the world's most densely inhabited countries and, unfortunately, the amount of public conveyance available in the country is not adequate to meet people's demand. The average speed of transportation in Dhaka city is only 7km/h, marginally greater than the speed of regular walking speed (Siddique, 2017). This result of traffic congestion is worth of 3.2 billion working hours per day. Thus an emerging country like Bangladesh, the system loss out of extreme traffic block is causing continual economic and environmental harm.

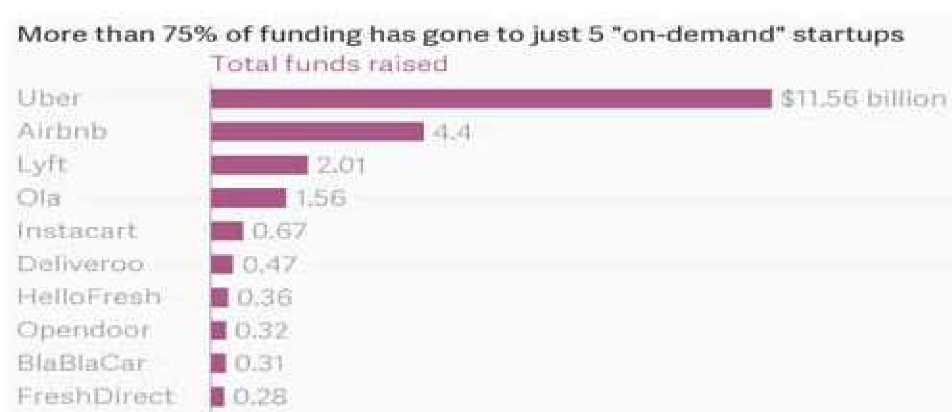

Figure I: Global startup funding distribution (Rajaraman, 2017)

Corresponding author: Samiul Parvez Ahmed Email: samiul@iub.edu.bd

In order to solve the global problem of traffic obstruction, numerous IT startups such as Uber, Lyft, Go-Jek and Grab have emerged. These ridesharing apps have helped to reduce traffic by about 75%globally (Alonso-Mora, Samaranayake, Wallar, Frazzoli, & Rus, 2017). Through

venture capitals and other sources, the entrepreneurs raised a huge amount of funds to develop their business models and technological foundation. For example, Uber, the largest among startups of different disciplines, raised an astounding $11.56 billion (Rajaraman, 2017). Pathao, another ridesharing app, established in 2015, is one of the first such initiatives in Bangladesh. Pathao was developed by the entrepreneur Hussain M. Elius. It involves bike rides as method of ridesharing services. It had started with only 100 bikes at the beginning and now it has a fleet of 50,000 bikes as its on demand rate has been increasing at an awe-inspiring rate (Mamun, 2017).

WHAT IS A STARTUP?

A startup is a business venture that is starting from scratch and endeavoring to manufacture something of significant worth. It is also a newly formed and fast-growing business structure which is in the initial stage of its development and made to take care of an issue by conveying a new product or service under conditions of extreme uncertainty that intends to fulfill the needs or a gap in a relevant marketplace. For example, when two friends, Travis Kalanick and Garrett Camp, could not find taxi during rush hours, they came up with the concept of Uber. Now it is one of the largest taxi companies without owning a single car by themselves; however, within the structure of this initiative people can share ride to go to a preferred destination(Stone, 2017). Unlike private ventures, startup would not like to remain small. Startups have products which target a largely untouched market. For example, seeing that no empty hotel rooms were available Airbnb founders Brian Chesky and Joe Gebbia, purchased a couple of airbeds and quickly set up a site called "Air Bed and Breakfast", which is now Airbnb, the $25 billion startup where homeowners rent out their homes to travelers(Carson, 2016).

HOW DO STARTUPS RAISE FUNDS?

Raising capital is one of the biggest challenges that any startup can face. Fortunately, today, there are numerous options to avail funding, both through public and private equity. In order to distinguish how much the buyer is eager or willing to pay, a thorough valuation process is conducted. However, the valuation process is not the same for private and public companies. A public company needs to hire an underwriter, ordinarily an investment bank, for the valuation process and to handle the sale. On the contrary, a private organization does not possess the wider appeal to general investors. As such, they pitch themselves to accredited investors such as angel investors or venture capitalists. But it does not hamper the ownership as it stays in the hand of a few chosen shareholders. The rundown of proprietors commonly incorporates the founders of the company, along with initial investors such as angel investors or venture capitalists. Unlike public companies, private companies do not have the same requirements for accounting standards which makes reporting far easier, but in such a case, investors should have the capacity to assess the firm's value before investing in the intended firm(Ross et al., 2014).

These entrepreneurs initially start their startups by raising capital through bootstrapping or seed capital. This initial capital comes as funds from personal savings rather than outside investors. Once they have established a business model for test operation, the startup is then usually financed by angel investors, venture capitalists or through crowdfunding. Angel investors are typically a diverse group of individuals who have accumulated their wealth from various sources or high net-worth individuals, who show an interest in helping new companies to develop. In contrast, venture capitalists invest in startups where they chose the ones which have more developed business model and also have a clear growth potential. Venture capital generally comes from well-off investors, investment banks and any other financial institutions. Venture Capital does not always take a monetary form and can be provided in the form of technical or managerial expertise(Marks, 2018a). Crowdfunding capitalizes on the easy access to the large network of people who can be reached through social media and crowd-funding sites that unite investors and businesspersons together, and possibly build entrepreneurship by extending the pool of investors from whom assets can be raised beyond the traditional circle of owners, relatives and venture capitalists(Marks, 2018b).

Startups prefer to avoid the public offering of equity, as the process involves many regulatory compliances and making confidential internal business processes public. Since these confidential ideas are the major unique selling points for these startups, they prefer private equity funding. They acquire Series A financing from external investors after burning through the initial seed capital. Startups usually go through a series of financing steps, once the seed capital is depleted and they achieve set objectives, startups next raise Series A financing by offering ownership to outside investors for the first time. Gradually, as the company grows, it raises Series B and Series C financing to undergo further expansion (Reiff, 2018).To elaborate, Series A, B, and C are essential elements for a business that chooses "bootstrapping" or funds taken from relatives as seed capital. The main contrast between the types of financing is the maturity level of the businesses. As mentioned earlier, Series A financing is given to the startups after the seed capital has been provided. Next comes Series B financing where B stands for "Build" and this is only implemented after the company has reached a certain milestone, has advanced its position, and resulting in a higher valuation by this time. Businesses acquire Series B financing from equity firms and venture capitalists. Series B investors contribute more funds than Series A investors but the risk remains lower. Lastly, Series C will follow if the company continues to grow. Before each cycle the company releases its valuation to determining the current value or worth of a business. This valuation is derived from elements such as management, proven track record, market size, and risk. During each round of financing, the investors require utmost transparency to determine where the company stands in the hierarchy of claims to profits.

VALUATION OF A STARTUP

Since startups do not have much history and may still not be able to seem to turn a benefit, putting resources into them is viewed as highly risky. The principle of valuation implies finding the present value of all expected future cash flows, which requires forecasting using historical data. Since startups lack such data, investors typically value them in the following ways(McClure, 2018):

The Cost to duplicate approach

This approach considers the company's expenditure and overheads that have incurred in order to create its product or service. The approach also considers Research and Development expenses and/or costs associated with acquiring a particular asset. But the limitations of this approach includes that it does not reflect on the potential growth of the startup.

The Market Approach

This approach also known as the Comparable Company Analysis, takes a glance at what comparative organizations have been acquired for. However, there is a big limitation as the nature of a startup implies that there is no other business with similar operations.

The Discounted Cash Flow approach

This approach looks at a company's prospective cash flows with an exceptionally subjective viewpoint.

The Development Stage Approach

This process allots a greater possibility of budding values to companies that are further developed. For instance, an organization that has a vibrant path to profitability would have a higher valuation than one that simply has a captivating idea.

Since startups have high failure rates, potential investors ought to consider not only the thought, but rather the management team's experience. The valuation of a private firm is loaded with presumptions, best figure appraisals, and industry averages. It is a difficult task to place a reliable value on a startup as it lacks transparency unlike public companies, which is relatively straightforward. On that note, the difference between valuation of a typical public company and a startup company is that public companies are valued on actual earning and the prospect or future earnings whereas a startup is valued by the problems it intends to solve or in other words the milestone it tries to achieve along with its relevant transactions and other operating data.
Following is an example of a simplified valuation methodology for an early-stage company:

Valuation of startup firm can be done by using the following formula:

$$PMV = (V * M) + I \dots\dots\dots\dots\dots\dots\dots (1)$$

Where, PMV= Post-Money Valuation, V= Gross merchandise value, M= Median multiple, I= Proposed new investment

$$IO = \frac{I}{PMV} \dots\dots\dots\dots\dots\dots..\dots\dots\dots (2)$$

Where, IO=Implied ownership, I= Proposed new investment, PMV= Post-Money Valuation

For example, an early-stage company has V = \$1,000,000, M = 5, and I= \$1,000,000.

In such a case,

PMV= (\$1,000,000*5) + \$1,000,000 = \$6,000,000; and

IO = \$1,000,000 / \$6,000,000 = 16.7%
Thus a new investor will invest \$1,000,000 in the firm and will receive 16.7% ownership of the company.

STORY OF PATHAO

Dhaka bears a stigma of road traffic. People of Dhaka move from one place to another with an average speed of 7 km/h, which is slightly above the walking speed, and, hence, lose around 3.2 million hours a day. To solve this everyday problem, three university graduates thought of an answer to commute quicker around the city. Hussain M Elius (CEO), a North South University former student and Shifat Adnan (CTO), an alum from Rajshahi University of Engineering and Technology (RUET), had a vision to solve the daily problem of general people which is to wage their transportation mode and to go to their destination in a short span of time, beating the traffic of this densely populated city. While Elius was doing his MBA, he met Fahim Saleh who used to work in HackHouse and bonded with him in a very short period. They started to explore different business ideas and became involved in six businesses. However, among these ventures, Pathao: a human and commodity commuting service was showing outstanding performance. They decided to concentrate more in Pathao. Soon afterwards, they received initial seed capital from Fahim Saleh, an angel investor.

As a background, Elius started coding when he was in class six and started freelancing in high school. He started a small UI/UX firm while he was in University and started doing UI outsourcing and consultancy(Future-startup, 2017).As mentioned earlier, other than Pathao, Elius was also involved in several other businesses which include Kaiju Themes (a monster theme studio), DhakaRides (carpooling in Dhaka), HackHouse Dhaka (business incubator) and JeteChao? (Where you can explore what is happening in Dhaka).

Pathao initially started as a logistics service provider for traders with the aim of delivering goods to the customers without any delay. They realized that a motorbike would help delivering items comparatively quicker than a car or some other vehicle. It started as a secret Facebook group where the founders asked their friends if they wanted a ride or delivery made and keep track of records in MS Excel. As they did not have any professional app developers when the app was first launched, launching the app was a big challenge. Irrespective of the challenges the first iteration was built by the founders themselves. Once they realized that there is a latent demand for efficient commuting service in Dhaka city, they, through the Pathao, started raising awareness about motorbike service as a potential commuting vehicle; which gradually changed the demand for transportation mode in urban areas of Bangladesh.

Pathao is growing every day since its launching in 2016. Initially it did not plan on transporting individuals on motorbikes; it was a delivery service to deliver ordered goods to the customers from outlets of e-commerce services such as daraz.com.bd, ajkerdeal.com etc, both inside and outside of Dhaka. Pathao shares many similarities with Indonesia’s Go-Jek. In 2010, Go-Jek made ecommerce deliveries inside Jakarta. Later it offered motorbikes for personal transportation. According to cofounder and CEO, Hussain M. Elius, although Pathao and Go-Jekis are similar, Pathao is an independent business and its technology is built in-house. Pathao initially started with only 100 bikes and today claims to have over 50,000 motorbikes and a group of 500 workers who cover three urban communities. Pathao also claims to be handling a million rides and more than hundred thousand deliveries every month. In the coming years, Pathao scaled by providing various product lines using the same platform, offering bike sharing, and also delivery of parcels and foods. However, it still works hard to achieve growth in terms of transaction, value and margin.

HOW PATHAO RAISED FUNDS?

Primarily, Pathao gathered funds for its business through seed capital. They managed an undisclosed sum of funds through local and foreign investors and friends and family. They had to go through a lot of hurdles when looking for venture capitalists, as successful local startups are hard to find in Bangladesh. An Indonesian bike hailing company, Go-Jek has invested an estimated of $2million in Pathao as a part of Series A funding. Go-Jek has started its second level investment in Pathao, which it announced as Pre-Series B investment, reported to be around $10 million (Russell, 2018). This new deal includes participation from existing backers Openspace Ventures- which just rebranded from NSI Ventures. Pathao also received funds from Go-Jek backer-Osiris Group and Battery Road Digital Holdings. As per the CFO of Pathao in a meeting with the researchers, Pathao is claimed to be valued at more than $100 million. They plan to use this Pre-Series B fund to accomplish the following three major goals:

- Looking to enrich current mode of transportation services in Bangladesh. In doing so, it aims to reach new untapped cities and integrate an ever increasing number of vehicle modes i.e. motorcycles and cars.
- Offering a wide variety of lifestyle brands and products/services through the same app platform. Pathao aims to provide the diversified offerings similar to GRAB, where points earned through usage can be used to avail various offers.
- By introducing online wallet technology, get rid of manual way financial transactions. Through wallet technology riders can pay their fare and top up money using credit cards or mobile banks.
- This cloud storage for money will be used to make cash free payments and Pathao is developing partnerships with banks to achieve this goal.

PATHAO'S FUTURE

CEO and Co-founder, Elius said the firm plans to increase its dominance across Bangladesh with the possibility of covering 25 towns and cities and going international in the upcoming days. It is difficult to establish an alternative payment platform in Bangladesh as people here are more used to do transactions using cash. As an initiative to change the whole system, by 2019, he plans to launch a mobile wallet which will reduce consumers' dependence on cash payments. It will work like mobile operators' pre-paid connections, where credit must be purchased prior to service. The Pathao Pay wallet can be topped up from financial institutions such as banks or a Pathao service delivery person. This method will be convenient for customers as it will reduce the problem of keeping changes during cash transactions. Customers will be able to use this credit to purchase Pathao services, which reinforces to establish a cashless digital e-ecosystem.

CHALLENGES FACED BY PATHAO

Running a new business is always full of challenges and like all businesses, Pathao faces a lot of challenges as well. With people becoming more impatient day by day, it enforces a huge pressure on Pathao as they expect a ride within few spans of seconds, but in reality it is not feasible considering the infrastructure and unbearable traffic. With that being said, having inadequate number of vehicles, the service faces huge problem as customers shifts to the next best alternative ride sharing app when they are unable to find a ride in Pathao. Other than that, with a huge number of startups with similar focus are rising like Obhai, Sam, Shohoz rides, Chalo, etc. These new initiatives are creating more competitive pressure on Pathao. Other than this issue, safety is one of the biggest challenges as accidents on motor-cycles are always more devastating than cars. In many earlier cases, there were complaints that Pathao riders do not offer helmets to their passengers. In order to address that issue, Pathao enforced and provided helmets to a lot of their riders so that they only start a ride after the passengers put the helmet on. Targeting female customers is usually as a major challenge for a motorbike ride in Bangladesh due to cultural issues. However, the time is changing and more female customers are using these services now-a-days. Nevertheless, Pathao has to constantly deal with the Bangladeshi regulatory bodies regarding various issues; i.e. road and safety and IT security. As time goes by, they are going to remain flexible while dealing with recent regulatory updates.

In a country like Bangladesh, there are too many me-too competitors who fail to survive after an initial idea clicks in the market. In the case of startups, it is a common issue. A lot of startups of Bangladesh failed due to substandard customer service, lack of focus, get-rich-quick scheme driven marketing and poor product offerings (Chowdhury, 2017). Pathao has constantly faced criticisms from their customers to improve their services and stand out from their competitors, and so far they have sustained admirably.

CASE STUDY QUESTIONS

- Try to identify a unique problem the country is currently facing, and how you can propose a startup business to address the situation.
- Continuing with your proposed startup, discuss and decide on which of the four valuation methods would be better suited for you.
- Based on this case study, determine what could be some appropriate milestones for Pathao, should they approach Series C funding round in the future?

REFERENCES

Alonso-Mora, J., Samaranayake, S., Wallar, A., Frazzoli, E., & Rus, D. (2017). On-demand high-capacity ride-sharing via dynamic trip-vehicle assignment. *Proceedings of the National Academy of Sciences, 114*(3), 462-467.

Carson, B. (2016). How 3 guys turned renting an air mattress in their apartment into a $25 billion company. Retrieved from 04/07/2018, from https://www.businessinsider.com/how-airbnb-was-founded-a-visual-history-2016-2/?r=AU&IR=T

Chowdhury, M. (2017). Opinion: 6 reasons why tech startups in Bangladesh continue to struggle. *Techinasia - Startups.* Retrieved from https://www.techinasia.com/talk/opinion-reason-bangladesh-tech-startup-struggle

Future-startup. (2017). Innovator Under 35: Q & A With Hussain M Elius. *15 under 35.* Retrieved from https://futurestartup.com/2017/01/18/innovator-under-35-q-a-with-hussain-m-elius/

Mamun, S. (2017). Meet the minds behind the success of Pathao. *Daily Tribune*. Retrieved from https://www.dhakatribune.com/business/2017/09/24/meet-minds-behind-success-pathao

Marks, H. (2018a). How Crowdfunding Is Disrupting VCs. Retrieved fromhttps://www.forbes.com/sites/howardmarks/2018/06/10/how-crowdfunding-is-disrupting-vcs/#d5cc51648237

Marks, H. (2018b). Why Entrepreneurs Will Turn To The Crowd For Funding. Retrieved from https://www.forbes.com/sites/howardmarks/2018/10/07/why-entrepreneurs-will-turn-to-the-crowd-for-funding/#372e9bee4331

McClure, B. (2018). Valuing Startup Ventures. *Financial Theory.* Retrieved from https://www.investopedia.com/articles/financial-theory/11/valuing-startup-ventures.asp

Rajaraman, S. (2017). The on-demand economy is a bubble—and it's about to burst. Retrieved from https://qz.com/967474/the-on-demand-economy-is-a-bubble-and-its-about-to-burst/

Reiff, N. (2018). Series A, B, C funding: How it works. *Personal Finance.* Retrieved from https:// www.investopedia.com/ articles/personal-finance/ 102015/series-b-c-funding-what-it-all-means-and-how-it-works.asp

Ross, S. A., Westerfield, R. W., Jaffe, J., Lim, Y. S. J., Tan, R., & Wong, H. (2014). *Corporate Finance*. Singapore: McGraw-Hill.

Russell, J. (2018). Bangladesh's version of Go-Jek raises over $10M in a round led by Go-Jek. Retrieved from https:// techcrunch.com/2018/04/27/ bangladeshs-version-of-go-jek-raises-over-10m-in-a-round-led-by-go-jek/

Siddique, A. (2017). WB: Dhaka's average traffic speed 7kmph. *Dhaka Tribune.* Retrieved from https:// www.dhakatribune.com/ bangladesh/dhaka/ 2017/07/19/ dhaka-average-traffic-speed-7-kmph/

Stone, B. (2017). Uber: the app that changed how the world hails a taxi. *The Guardian*. Retrieved from https:// www.theguardian.com/ technology/2017/jan/29/uber-app-changed-how-world-hails-a-taxi-brad-stone