VALUATION OF START-UPS

FINAL YEAR PROJECT UG 18

By

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This is to certify that the

Final Year Project Titled

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submitted by

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has been accepted towards the requirements for the undergraduate degree

In

BS Accounting & Finance

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ABSTRACT

This paper is an empirical study of valuing the startups in Pakistan. Valuation of a public company is comparatively simple as there are defined methods to do so but on the contrary, valuing start-ups is a difficult task due to its complexities. A few studies and research papers are available in Pakistan regarding start-ups Industry and their valuation. Start-up valuation is a multifaceted task due to unavailability of data, unorganized revenue and cash flow streams. In addition, venture capitalists tend to concentrate their investment in one segment mainly due to the unavailability of research papers regarding the said topic. This led us to the selection of this topic for our final year project. To carry out valuation, initial data was gathered through interviewing the owners, industry and business analysis and on that basis, financial models were derived for four different start-ups. Using the assumptions which were based upon the industry observations and owners' planning, we forecasted the financial models for 10 years. By examining these start-ups from food and tech industry through different approaches like FCFF and residual income method, we came up with their intrinsic values. The Study required extensive research and our analysts had to apply non-conventional methods to derive accurate values for the Start-ups.

Based on out Study, owners can now pitch their ideas to investors and venture capitalists in order to get adequate investment and funds. Moreover, venture capitalists intending to invest in the startup industry will get a comprehensive outlook as to what might be the key drivers in a specific startup and what mechanism one must employ to value such start-ups.

Lastly, this Study provides a brief overview of the Start-up industry as a whole, and the segments in which the concerned Start-ups are operating. This will assist venture capitalists and analysts into deriving key assumptions while valuing a certain Start-up

Contents

Investment Snapshot

Intrinsic Value PKR 6,208,438

Invested Capital 5,000,000

Upside 24%

(10-Y Avg.) ROE 38.89%

Intrinsic Value PKR 76,395,103

Invested Capital 22,000,000

Upside 247%

(10-Y Avg.) ROE 42.60%

Intrinsic Value PKR 4,096,555

Invested Capital 1,000,000

Upside 310%

(10-Y Avg.) ROE 103.95%

Intrinsic Value PKR 5,760,230

Invested Capital 1,500,000

Upside 284%

(10-Y Avg.) ROE 47.84%

CHAPTER 1

INTRODUCTION

1.1 Entrepreneurship in Pakistan

Being an entrepreneur usually involves taking many risks. In some cases it drives you to leaving a good job to seeking after what you cherish, or put a considerable measure of cash into your thoughts and ideas. However, by the day's end, regardless of how dangerous it might be to take that jump, following your interests is dependably the best game-plan, and that is the manner by which most entrepreneurs turned out to be so successful. Alongside risks, entrepreneurship accompanies a great deal of difficulties and challenges. Perseverance is key.

"I'm convinced that about half of what separates successful entrepreneurs from the non-successful ones is pure perseverance." Steve Jobs.

1.1.1 Opportunity and necessity driven entrepreneurship

Entrepreneurship can be either opportunity driven or need driven. Opportunity enterprise reflects entrepreneurial endeavors to exploit a business opportunity. Then again, need driven entrepreneur is somebody who began a business in light of the fact that there were no better alternatives for work, as opposed to on the grounds that the person saw the business as an opportunity. Need driven business enterprise is very common in developing nations, and is utilized to gain admittance to a more comfortable and agreeable life. Most global organizations are pushing for business enterprise as an instrument to allow lessening of destitution in most developing nations. On the opposite side, innovation offers a lot of new chances to propose new business arrangements. Developed nations are utilizing innovation driven solutions for supporting the formation of new company. Nonetheless, developing nations can take advantage from opportunity driven enterprise by utilizing innovation driven solutions to fulfill the particular needs of their nationals.

1.1.2 Startups' growth and notable startups of the last decade

In the present complex economic conditions, business enterprise and advancement have been critical in building up another present state of affairs. US beat the Global Entrepreneurship Index (GEI) because of its appealing ecosystem, assets and foundation. On a worldwide scale, top performing nations in the list are Switzerland, Canada, Sweden, Denmark, Australia, UK and Ireland, Netherlands.

Pakistan is bringing about new solutions to unravel the different issues the nation is facing. Artists, with the use of their visuals shed light on significant issues, writers using their words tell critical stories, doctors using their expertise cure the patients and entrepreneurs use their skills to find and develop new solutions to the problems. The startup sector of Pakistan is yet not fully developed and is in the beginning phase. A few new businesses have started and disappeared before our eyes. Being a business person is a steady battle and there are various startup owners out in the industry endeavoring to have an enduring effect

Following are some of the notable startups in Pakistan from last decade

Startup	Description
Zameen.com	• Online property portal • US$20 million series C round in January 2016 • January 2017 valued at US$83 million • The most valuable startup in Pakistan.
Well	• Health and lifestyle store • US$1 million by angel investors Nadeem Hussain and Noor Abid. • Sells fitness supplements, vitamins, and herbal products • Now also offers home appliances and medical devices.
PerkUp	• Assists small businesses in embracing the digital age • Helping them recognize consumer preferences, e.g. customers visits, their purchases, and actions like flash discounts and targeted promotions. • Closed a US$150,000 seed round in 2016
RepairDesk	• A software that assists mobile repair shops in managing their inventory and customer orders • It allows technicians to manage repairs, sales, customers, and suppliers all in one place. • It seized a US$40,000 seed round from a US-based investor.
Sukoon	• An on-demand marketplace for home repair and maintenance services • Pocketed an undisclosed amount of seed funding in January. • Trying to regulate the informal labor market in Pakistan. • It conducts background checks and assesses the technical skills of workers before they are added to its database.

1.1.3 Government policies and role of incubation centers in promoting entrepreneurial ventures growth

Numerous factors have disturbed the entrepreneurial development in Pakistan. Initially, the general population of Pakistan are unwilling to take risks. From a youthful age, youngsters are told to select standard career options, for example, medical, engineering etc.; the reason being the economic wellbeing attached and the salary stream these jobs guarantee. Furthermore, a regular family has constrained access to capital assets and these are insufficient to enable youngsters to start activities, for example, own businesses, which are considered risky

Considering these variables, our government stood up to make arrangements. In the beginning, through the IT Board and Plan9, the government presented the idea of 'business incubation'. This was assisted by Plan9's endeavors to urge institutes to follow the idea. Thus, entrepreneurship got considerable attention from the education community too. Currently, 20 universities crosswise over Pakistan have set up incubation centers in a joint effort with Plan9.

Plan9 gives facilities that are important to a start-up in order to develop and advance, for example, office space, fundamental utilities, lawful guide and an expert system, free of cost. What's more, new companies are offered stipends for money related sustenance. With nothing to lose in money related terms, youngsters have been pulled in to business enterprise as a feasible vocation choice. The half year incubation program diverts a start-up from a business thought to a versatile model. Nonetheless, it needs further polishing to end up an organization. Thus, PlanX, an innovation agent was propelled to connect that hole. To date, PlanX has delivered 30 new companies and raised an investment of three million dollars.

The private sector has additionally ventured up and is taking part effectively. Corporate players, for example, Mobilink and Telenor have fueled business incubators, while universities, for example, LUMS, have set up habitats for enterprise that facilities, hands-on offices to developing entreprenuers. The Nest I/O in Karachi, fueled by P@SHA and Google for Entrepreneurs is refining the diversion in Sindh and has made a considerable contribution to solidifying the situation with Punjab.

1.1.4 Venture capitalist and private equity sector in Pakistan

Venture capitalist Firms assume an indispensable part in an entrepreneurial environment. They offer direction to business visionaries as well as help them construct beneficial new companies and give seed financing to plans of action that they see suitable. As of now, the investment/private equity industry in Pakistan is amll. A portion of the local brokerage houses, for example, AKD Securities, BMA Capital, AMZ Group, and Jahangir Siddiqui have set up funding firms.

Securities and Exchange Commission of Pakistan has specified the methodology for incorporation of NBFC (Non-Banking Finance Company) and licensing as PFMC (Private Fund Management Company) which can carry out Private Equity and Venture Capital Management Services. Furthermore, the SECP Private Funds Regulations 2015 provide the regulations regarding conditions, prohibitions, procedures for registration, minimum investment etc. In April 2017, The Securities and Exchange Commission of Pakistan (SECP) approved the first private equity and venture capital fund worth $100 million under Private Funds Regulations 2015.

Ijara Capital Partners Ltd, a private equity firm authorized by the SECP in October 2016, has been permitted to attempt private equity and investment finance administration. As per the SECP's document of approval dated April 20, the commission has enrolled Pakistan Emerging Market Fund-1, which is sorted as a private equity and venture capital fund.

A list of some Startup Incubators & Venture Capital Firms in Pakistan is as follows

LUMS Center for Entrepreneurship (LCE) – The Foundation Fund	**Shell Tameer**	**PLAN9 TECHNOLOGY INCUBATOR**	**Frontier Digital Ventures**	**Golden Gate Ventures**	**Northstar Group**
Northstar Advisors Pte. Ltd.	**Abraaj**	**Techstars Ventures**	**Invest2Innovate**	**10xc**	**National Incubation Center**
Indus Entrepreneurs (TiE) Islamabad Chapter	**WECREATE Pakistan**	**PLANX**	**Planet N**	**National ICT R&D Fund**	**Dot Zero Ventures**

Therefore, as the government continues its efforts to develop and strengthen the entrepreneurial activity and environment in Pakistan, persistent effort by their provincial counterparts and active contribution from the private sector, incubators and venture capitalists will make Pakistan Asia's next start-up hub.

CHAPTER 2

Literature Review

Analysts have different views about start-up valuation and some believe that it is impossible to value startups due to the fact that there is no historical information and sometimes no products and services to sell. While different analysts have different opinions regarding this, one thing that all literature addresses is that startup valuation is more complex than the valuation of established firms public or private. Literature also explains that while different methodologies have been brought up by different analysts, the fundamentals of valuation do not change. The value of a startup is the present value of its expected future operating cash flows, however the determination of these cash flows and other valuation components is comparatively complex than that for an established firm.

Analysts mainly utilize the factors of negative earnings and presence of intangible assets as reason for not applying traditional valuation models while simultaneously developing methods to justify buying equity stake in young start-ups. (Damodaran, A. 2001). Along with other valuation techniques, Damodaran further explains in his book the venture capital valuation method stating that recently several young, start-up firms raised additional equity primarily from venture capitalists. History suggests that venture capitalist, being sector focused, put emphasis on investment in one or two industries. A major reason that has contributed to such a factor is that at any given point in time, the demand for venture capital is restricted to one or two industries. This is evident through the examples of the demand of biotech stocks in 1980s and the demand for tech stocks in 1990s. Equally important is the fact that the venture capitalist rely on their understanding to value firms and assist in managing them

The valuation of entrepreneurial company is very challenging especially when it is in the early stages of its operations, as Professor Hellman from Oxford University writes in his book about 'Start-up Valuation'. Professor Hellman mainly discusses the Venture Capitalist method, the discounted cash flow method and the comparable method and highlights the reasons for involving in complex valuation and the purpose behind it. Professor Hellman is of the view that the investors and entrepreneurs aim to develop an informed opinion while they are going into the negotiation process using different valuation methods. Secondly, they justify their bargaining positions using the methods they have already used for valuation. This process provides them with a resulting valuation that determines the stake the investors receive along with the expected rate of return on their investment.

Hall, R. (2010) has further compared the difference between the cash rewards entrepreneurs receive over 20 years in comparison to what they would have received had they had gone for a risk free salaried job. The payoff entrepreneurs receive from a venture is generally lower than the market salary but they receive a stake in the equity value of the company, if the venture goes for IPO or is acquired by another firm. Hall further highlights that only a handful of entrepreneurs receive billion dollars while almost three quarters receive nothing upon exit. The research paper explains that during the startup process, entrepreneurs collect only submarket salaries. The compensation that attracts them to startups is the share they receive of the value of a company if it goes public or is acquired (Hall, R. 2010). Other Research Papers and Studies highlight how the application of traditional valuation techniques in the valuation of start-ups is invalid. This is because the traditional methods of valuation are mostly applicable on firms having a valid going concern along with sufficient historical record of important line items such as revenues. Entrepreneurial enterprises are lacking in the areas of having historical information regarding their revenues and costs and so it is justifiable not to use traditional methods of valuation on while valuing them. (Audretsch B. 2012). Audretsch emphasizes on the fact that for the purpose of valuation of an entrepreneurial enterprise, which is more technology based, the comprehension of the availability of alternative or complementary technological resources must holds utmost significance rather than focusing on substitutable products.

The existing literature has highlighted how the valuation of start-ups is complex concerning their riskiness they face along with the factor of uncertainty embedded in them. It is therefore an established fact that traditional methods of valuation are not applicable due to the aforementioned reasons. Research papers and Studies show how the issues of young firms losing money while having no history or substantial tangible assets are not the real problems. The actual problem lies in the fact that these firms are in the early stages of their life cycles in relation to established firms and therefore must be valued before they even have a proper market for their products. It must be noted here that upon researching, one finds minimal research on the relevant topic especially when the local market is concerned since Studies based on International markets are readily available but minimal in quantity. The aforementioned reasons and factors have lead us to the topic of our Final Year Project; '*Valuation of Start-ups in Pakistan'*

CHAPTER 3

TryOn

3.1 Start-ups introduction

TryOn aims at bringing the ease and speed of the online shopping experience into the store allowing shoppers to TryOn tons of outfits just by swiping with their hands.

With the combination of 3D body scanning technology and RGB-D sensors, TryOn presents realistic 3D product models, which are scaled to virtually fit onto your body and synchronize with your body movement within the live video feed – allowing you to see the virtual fitting from several angles, even the folds of the fabrics as they twist and turn.

The clothing industry of Pakistan is very competitive as evident from the recent Mega Sale events launched by some of the famous Pakistan clothing brands. The Developers hope that even if one of the major brand agrees to install the product in one of their branches, agreements with other brands can be secured since all of the brands will want to provide maximum facilities to its customers.

3.2 Owner's profile

Two people namely Izhar khan and Abdul Moez Faruq founded TryOn.

3.2.1 Background of owners

The owners had participated in multiple in entrepreneurship-related contests prior to establishing TryOn. According to our conversation, both of the owners explained how they were working on the idea of introducing TryOn long before it was launched/established as a startup. Both of the owners are SEECS-NUST Graduates with majoring in software engineering.

3.2.2 Risk aversion

Owners' risk assessment is balanced (overall)

3.2.3 Compensation at an alternative non-entrepreneurial job

Upon consultation, the owners believed they could earn within PKR50000-60000 at an entry-level position in any firm.

3.2.4 Entrepreneurs assets invested at the beginning –monetary value

The owners injected equity worth PKR 2 Million during the implementation phase of their idea.

3.2.5 Return sought by the entrepreneur

The founders expect returns at around 10%-20% after they officially start marketing the product and start securing the clients.

3.2.6 When would they exit the company and what value they aspire to get the exit

The owners believe they would be expecting exit value of at least PKR 20 Crore in 5 years' time to part ways with the company.

3.2.7 Rounds of venture cap investing

No rounds of venture capital investment has been undertaken as of yet.

3.3 Competitors

Cisco Styleme

Cisco Styleme is a virtual fashion mirror introduced by Cisco, which is similar to TryOn in multiple aspects. Styleme is a life-sized mirror that overlays the customer's image with pictures of clothing they select using gesture- and touch-based interfaces.

Amazon's patent

Amazon was recently granted patent for a blended reality mirror. It signifies what Amazon is targeting and aiming to achieve for the fashion industry and we may see a product similar to TryOn developed by Amazon in the future. In addition, Amazon is already offering a product with the name Echo Look that uses AI technology and offers similar features through VR Device.

3.4 Assumptions

Management:

The owners of TryOn are of the view that their product will gain popularity in Pakistan. The initial public response and reactions to TryOn were welcoming as it was an overall new technology for the public. The management of TryOn is planning and targeting an aggressive approach towards expansion and growth of their company. The company plans to set up offices in every major city of Pakistan by the next five years. Their initial research and meetings with representatives from multiple brands has highlighted the need for such product in the stores. TryOn is offering customers a chance to try on every clothing design a company is offering, by only using their hand gestures. TryOn further provides statistical information to customers by showing them the most popular design, highest selling article and other user reviews. Considering the fierce competition that has developed in the clothing industry in recent years with the growth In textile business and the establishment of multiple malls across the country, the management believes that securing just a few brands on board will force other brands to install such a product in their outlets too to match their competitors. Furthermore, reports of privacy breach in an outlet of a renowned brand where a camera was found fitted in one of the try rooms will force the public towards using TryOn as an alternative to try rooms. Management believes TryOn will eradicate the use of TryOn in future years and renowned brands will find it necessary to use TryOn in their outlets to provide public with maximum benefits.

Revenues:

The revenues are being derived mainly from TryOn unit sales and service charges. For the TryOn unit sales, the company is offering multiple packages from which clients will be asked to select one package according to their requirements.

As for the price being charged by the company for the product, a probability method was used to determine the average price. Mainly three bundles that are being offered were considered. The units offered under each bundles were 1-10 (Bundle 1), 10-50 (Bundle 2) and larger than 50 (Bundle 3) respectively. Based on the initial survey conducted by the relevant management, 80% of the clients surveyed chose Bundle 1 as their primary option amongst all other options. Rest of the bundles were selected by the remaining surveys in equal proportions. Utilizing these probabilities and the prices that were being offered on each bundle, with highest being offered on Bundle 1 i.e. (PKR 260,000), we came up with the average price (PKR 252200) that was to be used for financial modeling purposes. A discount of 11-12% was offered on the price as the client moved up the bundle order i.e. ordered more units. In Addition, the already calculated average price was adjusted for certain percentages for the next 10 years to incorporate management's aim to hike prices up to a maximum of PKR 400,000 in 10 years. The 8% initially incorporates the increasing demand of the product in starting years whereas it drops down 3% and 1% growth thereafter. In addition, the CAGR for the forecasted prices stands at 4.25%, which is in line with the average inflation rate or inflation projected figure of 4.5%.

As for the service charges, second source of revenue for the company, a weighted average method has been used with the same weights to determine the average price that will be charged for developing 3D Models and Patterns for the clients. The average price of PKR 433,590 was adjusted for same growth rates used for TryOn unit prices in the forecasted years.

Replacement Sales are the third source of revenues for the company. In order to cater for such factor, the management believes some of the units installed will need replacement after three years of functioning. For such matter, the management believes 15% of the units sold will need replacement 3 years later for the first 5 years, whereas they are forecasting 20% of the units sold to be replaced during the next 5 years. The aforementioned percentages are entirely based on management's calculated estimate.

Determining the revenue was dependant on the total brands operational in Pakistan and the average outlets each brand has in all of the provinces of Pakistan. The baseline figure for total brands was determined based on the brands present in Centaurus Mall Islamabad. The underlying assumption being that all of the major clothing brands are operating in Centaurus. The growth rate assumed was taken as the growth rate observed in the textile sector of Pakistan of 0.78%. In addition, an absolute 1.5 was added to each figure to account for new brands that enter in Pakistani markets each year, a figure based on past trends. Furthermore, after 5 years, an absolute two was added to account for the increasing trend in new entrants entering the Pakistani garments market. Based on what the owners predicted, we have assumed the addressable brands out of the total brands would be 50% in 2018 growing at 3% thereon until 2022, after which it will grow at 1%.

After computing average outlets for each brand, determined through major players' annual reports, and growing the aforementioned figure by absolute 1.5in stable period and absolute two in high growth period to account for increasing number of outlets being established across Pakistan. To determine the addressable percentage of outlets, management's estimate of 40%

was used in the base year, which was grown by 25% each year until 2021, after which it will be kept constant. This was done to incorporate the company's strategy in future years and increased investment in marketing.

Using the figures obtained from the aforementioned calculations, total outlets addressable were computed, which was calculated by multiplying the addressable outlets per brands and the addressable brands. In case of the base year. The outlets addressed would be equal to the new outlets addressed in a year. Based on the company's estimates, we have set the percentage of obtaining new outlets in a year at 30% for the first year, after which it will be 15% for the remaining years. These estimates were based on management's current performance and their progress up until now, which has been extrapolated into further years. For the next year, the total addressable outlets were calculated as mentioned before, after which the outlets that were addressed but not obtained from last year's efforts will be subtracted from this year total addressable outlets to calculate the outlets that agreed to install TryOn in the current year. Therefore, the newly addressed outlets would be the difference between total addressable outlets and readdressed outlets from last year. In this way, the total outlets addressed would be the sum of new and readdressed outlets obtained in the current year. Regarding percentages for readdressed outlets, which are kept constant at 50% throughout, the underlying assumption, is that management will be able to secure more readdressed outlets as compared to new outlets in a year since new outlets will be reluctant in accepting that there should be TryOn in their stores. Subsequently, the total number of units sold in a year were calculated assuming every obtained outlet has one TryOn screen installed.

The brands obtained we initially calculated will be used to determine the revenues generated from the service charges. The average price from the service charges initially were then used to calculate the total revenue generated from service charges, as one brand will have to subscribe to ascertain package if it plans to use TryOn at its stores. The replacement sales will be kept at 30% initially of the units sold for the first 5 years after which the percentage will be 50% of the units sold for the remaining 5 year, which is based on the underlying assumption that the probability of the TryOn unit going obsolete will increase.

Cost of Goods Sold:

One of the most significant costs for Tryon were its Cost of goods sold accounting for almost 67% of revenues in its first year. This includes the cost of making one unit of TryOn. Further breakdown of the cost includes the equipment cost, which includes the screen, protector and casing, delivery at customer premises cost, installation cost, warehousing cost and Customs duty and delivery fee the company has to pay to import components of the product. The Equipment costs are adjusted for changes in custom duties hence the difference in product cost each year. The custom duties started with 25% during the first year of the current government's tenure and is currently 50%. It has been calculated in such a way that the average of the custom duties for the past 5 years was taken, and a certain percentage was added in it at a constant rate to take the percentage of the custom duties at the same level as it is now by the end of next government' tenure. It has been based on the assumption that the new government will hike the custom duties percentage by the end of their tenure. Spares are taken 2% of the product cost. Delivery to customer premises are charges associated with the petrol consumption, which is the reason the said figure has been adjusted for changes in petrol prices over the forecasted period. The growth has been taken as the average of the year on year growth over the past four years in petrol prices.

Service providing cost:

Other costs include salaries of different personnel hired by the company including Interns, management staff, technical staff, sales person, team lead, project manager, 3D Model Developer. The interns' salaries are not annualized due to the fact that majority of the interns will be working with the company for 6 months. The salaries are increasing by 5% each year to incorporate the impact of inflation in Pakistan. The highest salary expense is that of 3D modeler. The costs are calculated based on the personnel required under that specific position and their salaries. The number of personnel required depends majorly on the company's expansion plans. The monthly salaries are annualized to get annual salary expense of one individual, which is then used to compute the total salary expense for that head. Technicians and sales persons form the majority of the workforce of the company.

Other Expenses:

Other expenses include Human resource management staff, cash collection expenses which is one of the most significant expenses under this head, depreciation for furniture, equipment, Rent, Telephone, electricity, Internet, marketing and laptop. The cash collection incorporates the impact of transactional costs incurred when performing transactions through banks. The cash collection costs have been kept at 3% of the revenues generated per annum. Depreciation rates for furniture, Laptop and equipment were taken from Income Tax Ordinance, which were 15%, 20% and 30% respectively. The depreciation rates were applied on the relevant asset's value at the start of the year. Rental expenses were quoted as annual rent for one offices and so it was directly proportional to the offices the company plans to establish in different parts of the country. The rental expense was increased by a rate of 5% to incorporate the norm of increasing rental rates each year. Electricity, Telephone, internet and miscellaneous expenses were all related to the number of offices the company plans to establish and so their annual rates were multiplied by the number of offices each year. Electricity expense was also adjusted for inflation for future years. Owners plan to buy a new laptop every 4 years in order to keep the software up to date with the latest technology available. Marketing expenses incurred are directly linked to the owner's expansion plans. The owners plan to expand their operations in other cities of Pakistan however; the owners want to keep offices in each city limited to one. Since they spent PKR 500,000 during their marketing campaign in Islamabad, we have reason to believe they will spend the same amount in each city as they gradually expand their business.

Non -Current Assets

Non-current assets include furniture equipment and laptops the company wishes to use. The following are the assumptions for each line item:

- Furniture: The capital expenditure on furniture has been assumed at PKR 1 million per office annually. The company has incurred PKR 1 million initially for their single office in Islamabad, which is the underlying assumption we used for financial modeling purpose.
- Laptop: The laptop costs at PKR 90,000 depreciated at 20% (straight line method)
- Trademark, Prototype and company registration cost will remain same for the next 5 years

Receivable/Payable/Inventory:

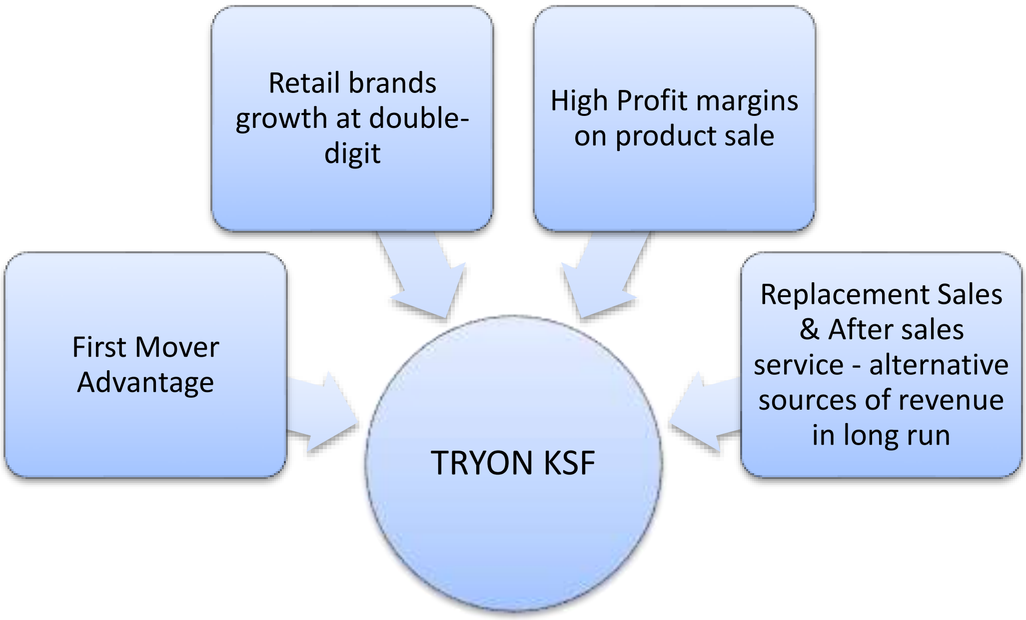
The working capital figures were calculated with their respective turnover ratios and using relevant revenues and cost of goods sold figures. The receivables of the company were calculated against the revenues generated from service charges the company will be providing. Receivable days will be kept constant at 30 days. As for the payable days, the company will have credit policy against the client they are importing from, and will be calculated against the equipment cost. In addition, the company will be outsourcing the task of delivery to customer premises. The payable days will be kept at 90 days and 10 days respectively. The inventory days will be calculated against the cost of goods sold. The company plans to maintain inventory days at 10 to limit the chances of damage to the units since the units must be handled with great care.

Capital

The initial owner's equity injected in the company was PKR 2.5 Million, which will remain same since the owners do not plan to invest their own equity in the near future and will be looking forward to securing investment from investors.

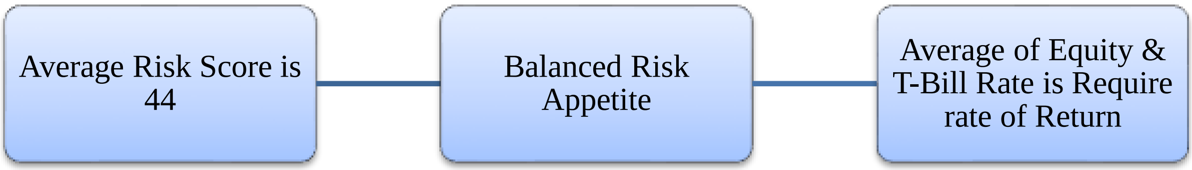
3.5 Investment Summary:

TryOn will revolutionize the clothing retail industry and drive the competition into a completely new dimension for the existing players. Brands, apart from their desire to put out the best designs, will be looking towards providing state of the art tech facilities in their stores. TryOn will always have the first mover advantage in this segment. The fact that TryOn will have the first mover advantage and will partially be the reason behind the stimulation of such competition between retail brands, it will prove fruitful for it in many aspects.



3.6 Valuation

The overall risk appetite of the owners is balanced due to which the average Required Return that investor of TryOn was 17.18%.



Discounted Cash Flow Valuation	Terminal Value at Rs. 36 million
	Prepertuity Growth Rate at 3%
	Required Rate of Return is 17.18%
	Pre-Illiquidity Adjustment Valuation is Rs. 7.6 million
	Illiquidity Discount at 11% and Country Risk Premium (Pakistan) at 8%
	Entreprise Value at Rs. 6.3 million
	Initial Investmetn of Rs. 5 million so showing upside of 24 pc.
Residual Income Valuation	Terminal Value at Rs. 23 million
	Prepertuity Growth Rate at 3%
	Required Rate of Return is 17.18%
	Pre-Illiquidity Adjustment Valuation is Rs. 8.4 million
	Illiquidity Discount at 11% and Country Risk Premium (Pakistan) at 8%
	Entreprise Value at Rs. 6.9 million
	Initial Investmetn of Rs. 5 million so showing upside of 38 pc.

3.7 Investment Risks

The investment caveats and risk mainly depend on a number of factors described below;

3.7.1 Inherent Risk:

The inherent risk within which TryOn will be operating is very high. TryOn will be operating in IT industry and poses high risks associated with the increasingly changing dynamics of the said Industry. The IT industry is competitive in all aspects and demands up to date capital and resources if one wants to compete with their competitors. Considering the industry in which TryOn operates, high capital is required to compete against major players. Timely delivery of raw materials and supplies is crucial to a company such as TryOn since many crucial components of the device will be imported and subsequently assembled locally. They will have to pre-order components and employ efficient inventory management techniques. In addition, unlike other companies, TryOn has to target retail brands and they cannot target customers directly. This implies that excellent negotiation skills will be required as convincing retail brands is more difficult that convincing direct consumers. TryOn also depends on the textile industry and the retail clothing brands. The textile industry is one of the largest industries of Pakistan with its GDP contribution at around 8.5%. The textile industry is sensitive to many macro-economic factors such as government policies, power and gas outages, political stability, corruption. One such disaster occurred in the textile industry during 2010 when power outage exceeded expectations and many textile mills had to shut down. This factor may force some of the retail brands to reduce its outlets.

3.7.2 Technology risks:

One of the most important risk Tryon faces is technology. As covered before, there are few but similar products being offered worldwide including Cisco’s Styleme and Amazon’s Echo Look. The fact that TryOn is importing multiple components and assembling them locally opens up the opportunity for major players like Cisco who can offer their product with greater period of warrantee and guarantees attached to it. Cisco also has the capability and necessary resources to develop the components on their own, reducing relevant costs. Since the management is expecting replacement sales, they will have to worry about the client’s satisfaction with the product's durability. One bad dealing with client/brand may force other brands to back out.

3.7.3 Policy Risks:

Since most of the components will be imported, the volatility in custom duties and other import related cost will have a major impact on the costs of producing one unit. This may force the company to charge higher prices. Other policies related to the product might force the company to make structural or product related amends.

3.7.4 Design Risk:

The company has to mitigate the design risk by employing using high quality components and establishing Quality Control Department to ensure the products are meeting standard requirements. The fact that components are being assembled locally makes room for errors and the company has to set certain standards and enforce these standards to ensure no compromises are being made on product quality. Sustainability of Tech-intensive products such as TryOn depends entirely on their efficient functionality and easy to use features. Compromise on the aforementioned factors may force retail brands to look for alternatives.

CHAPTER 4

Shazday

4.1 Start-ups introduction

Shazday was formed after four motivated students won 5th place in FICS business competition. That competition led them to find their mentors and form a partnership of six people who would go on to make it a sustainable business.

The name "Shazday" means "Allah ki Nemat" in Balti language.

Shazday aims to alleviate the economic climate of Gilgit Baltistan, by introducing its heavenly produce to the international markets. Shazday believes that Skardu's high quality Apricot is the best in the world and will sell like fire.

Shazday's business model revolves around connecting the farmers with the customers by solving the supply chain problems prevalent in the northern regions and educating the public about Skardu's heavenly produce.

With current presence in Pakistan, Dubai and USA, Shazday aims to become the next Del Monte of the world.

4.1.1 Owner's profile

There are six partners, who own this venture namely,

1. Abeera Hussain
2. Saud Waqar
3. Asif Mehdi
4. Haseena Batool
5. Ovais Zuberi
6. Bilal Baig

Background of owners

- **Abeera Hussain (Chief Executive Officer)**

Abeera Hussain is currently in her final year of Mechatronics engineering from NUST. Leading from the front and taking everyone along, Abeera intends to make Shazday a household name amongst the likes of Nestle and Unilever.

- **Saud Waqar (Chief Finance Officer)**

Saud Waqar is currently in his final year of BS Accounting and Finance from NUST. Having experience in providing value and maintaining stakeholder expectations, Saud is contributing his knowledge to a help form a success story out of Shazday.

- **Asif Mehdi (Chief Operational Officer)**

Asif Mehdi holds a degree in mechanical engineering from NUST. Having been born and raised in GilgitBaltistan, Asif has been running on-ground operations and providing valuable insight into how things are done in GB.

- **Haseena Batool (Chief Horticulturalist Officer)**

Haseena Batool currently pursuing a master's degree, specializing in postharvest processing, from Arid university. Having been brought up in Gilgit-Baltistan, Haseena has been living with these fruit all her life. She gives critical input regarding pre-harvest, harvesting an post-harvesting strategy to bring you the best fruit possible.

- **Bilal Baig (Chief Marketing Officer)**

Bilal Baig is an MBA holder from LUMS and head of marketing of Unilever, in Dubai. Being an expert on business-to-business marketing, Bilal is leading Shazday in terms of developing our farmer's cooperative and international sales.

- **OvaisZuberi (Chief Supply-Chain Officer)**

OvaisZuberi is a specialist in supply chain and business development. Having worked in various multinational companies such as Unilever, RB and Mars, Ovais is leveraging his network and experience to implement creative and value adding solutions to Shazday's operations.

4.1.2 Risk Aversion

Balanced to aggressive

4.1.3 Entrepreneurs assets invested at the beginning –monetary value

All of them invested equal amount comprising total of 3,000,000 PKR.

4.1.4 Rounds of venture cap investing

They have completed their first round of 15,000,000.

4.2 Assumptions

Management stance

Shazday started by the collective efforts of six individuals with the mission of tapping Pakistan's unappreciated potential. The team intended to do this by solving logistical, market and culture issues in Gilgit-Baltistan in order to harvest and export high quality Apricot all over the world.

The team wants to improve the economic climate of Pakistan's north and create recognition for Pakistan's heavenly natural produce.

Currently, the company is targeting ROE of 25pc. but it intends to move it up to 75 pc. By FY27. The company also intends to diversify into other fruit and fruit derivatives such as Apricot Oil, Apricot Kernel, etc. The vision is to become the next Del Monte of the world i.e., to be the household name internationally for fruit and fruit products.

Gilgit-Baltistan outlook

Gilgit Baltistan (GB) and Baluchistan are the two-main apricot growing regions in Pakistan, with GB alone producing 114,286 tonnes in 2007. Planting density is only 230 trees/ha, which is much less than the recommended 750 trees/ha, due to apricots being planted around field edges, rather than orchards.

Looking at the statistics of Chitral apricot production, a recent survey depicted that a yield per average household of 163kg/household in year 2009 which increased to 190kg/household by 2014. In 2017, the yield was 221kg/household increasing at 5-Year annual CAGR of 3.10%. Gilgit-Baltistan especially Skardu lacks behind Chitral in terms of land productivity and terrain differences as most of the apricot trees have been propagated by farmers themselves from a wide variety of naturally growing cultivars indigenous to the area. This has resulted in much of the harvest being low quality, unmarketable varieties and explains the high level of wastage. Therefore, a CAGR of 1.55% and 1.03% for FY17-20 and FY21-27 respectively is expected in its yield per average household factor which would increase the yield from 625kg/household to about 710kg/household by FY2027.

Average yields of fresh fruit are 38kg/tree which are good considering the limited use of inputs, although yields of 50kg/tree can be achieved through improved management.

Number of household living in Gilgit-Baltistan were around 204,500 in FY2017 which are expected to increase in line with IMF and World Bank expected population growth figure of 2.04% annually from FY18 onwards. Number of apricot trees is therefore expected to increase at CAGR of 0.51% from FY2018 onwards.

Shazday Prospect

Shazday current contracts with households give rights to production from 1,000 trees and number of trees are expected to increase with same CAGR of 5%, which means by FY2027, Shazday's controllable trees number would rise to 1,551 which management also expects about Shazday. Industry Yield, which is 41.7kg /tree, Shazday, expects higher yield than industry average. With use of Insecticides like Pheromone Disruptors and Manure as a fertilizer on consistent basis to keep land fertile and safe from bug attacks that damage crops, avg. yield of Shazday is expected to increase to 60kg/tree by the end of FY2027, with 4% annual increase in average yield.

Following table shows Shazday's Apricot production and sale composition:-

	FY2018-2022	FY2023-2027
Fresh Apricots	20%	25%
Dried Apricots	80%	75%

The recovery factor from produced apricots from tree will remain constant for first 5 years of operation at 70%, which shall increase to 75% onwards on the grounds of better negotiations skills developed by company over the years increasing bargaining power. Dried apricots suffer a weight loss of 50% percent approximately, which is held constant over the entire forecasted period.

Revenue

Exports ratio of total sales is expected to increase by 2.5% each year from 25% in FY18 to 45% in FY27. Exports command higher prices usually 5% above local prices and exchange rate depreciation makes exports sales even more attractive, increasing sales revenue. Currently, price of Fresh Apricots is around Rs.175/kg, and for Dry Apricots its around Rs.900/kg & Rs.964/kg in local and export market respectively. This price is predicted to increase in line with inflation at 5% per annum, which means by FY2027 price of Fresh Apricots will rose to

Rs.271/kg, and for Dry Apricots price will ascend to Rs.1,394/kg& Rs.1,493/kg in local and export market respectively.

Consequently, Local Sales for FY18 are estimated to be around Rs.9.3 million which are to climb to Rs.18 million by FY27 whereas export sales will increase at a much faster rate as Sales composition will change over the years and they will rose from Rs.2.9 million in FY18 to Rs.12.8 million by FY27. General Sales Tax (GST) of 17 percent is assumed to be remain constant and applicable throughout the forecasted period on Gross Sales Revenue.

Cost of Sales

Basically, the fruit is ripped through three types of trees i.e. Halman, Waflu& Kho which differ in terms of quality of fruit produced, with Halman demanding most premium about Rs.25/kg and Kho demanding Rs.15/kg that is paid to farmers as cost of purchase.

There are four stages of Supply-Chain in Shazday's operations with four different types of workers required at each stage. Following table shows Human Resource requirement for FY18 at each stage.

	Supervisor	*Labour*	*Driver*	*Helper*
Growing	5	0	0	0
Harvesting	5	60	3	2
Processing	10	15	0	0
Post-Processing	1	0	3	0

Monthly Salaries for Supervisor, Driver, Helper &Labour are Rs. 20,000, Rs. 18,000, Rs. 15,000 &Rs. 12,000 respectively. Theses salaries are to be increased in line with the inflation rate of 5.00% per annum. Human Resource requirement is held constant except for labor in harvesting stage, which shall increase at same CAGR of 0.51% at which number of trees controlled by Shazday is expected to increase in forecasted period.

Manure is used as a fertilizer, which costs Rs.250 per tree, and Pheromone Disruptor is used as an insecticide, which costs Rs.75 per tree. These average costs shall also increase with inflation rate of 5% per annum over forecasted period.

In an average box 4kgs of Fresh apricots could be packed whereas 4.5kg of dried apricots could be packed in the same box since there is differences in weights.

Logistics cost for Fresh Fruits is Rs.25/kg and that of Dried Fruit is Rs.13/kg since Dried fruits experience weight reduction of about 50% and are easily transported and stored so bear less costs.

Other Expense

Rent expense belong to Office located in remote area of Gilgit-Baltistan and for processing site for apricots. Administrative Expense and Utility Expense are highly correlated with level of activity and based on management's perspective we believe that, being prudent, 2% of Cost of Sales as opposed to Management's assumption of 1% of Cost of Sales seems more optimistic.

Depreciation Expense

Depreciation Expense are allocated on following basis:-

ASSET CLASS	DEPRECIATION RATE*	USEFUL LIFE OF ASSET
PLANT & MACHINERY	5.00%	Useful Life 20 years
BUILDING	10.00%	Useful life 15 years
VEHICLES	15.00%	Rate as per ITO Third Schedule Sec 22 (Useful Life unknown)
TOOLS	15.00%	Rate as per ITO Third Schedule Sec 22 (Useful Life unknown)

*All depreciation rates are applied on Reducing Balance method since during early years of operations asset utilization is max and so asset depreciation is also more high during that period, so bearing upon this assumption Reducing Balance method is more optimistic.

Fixed Asset

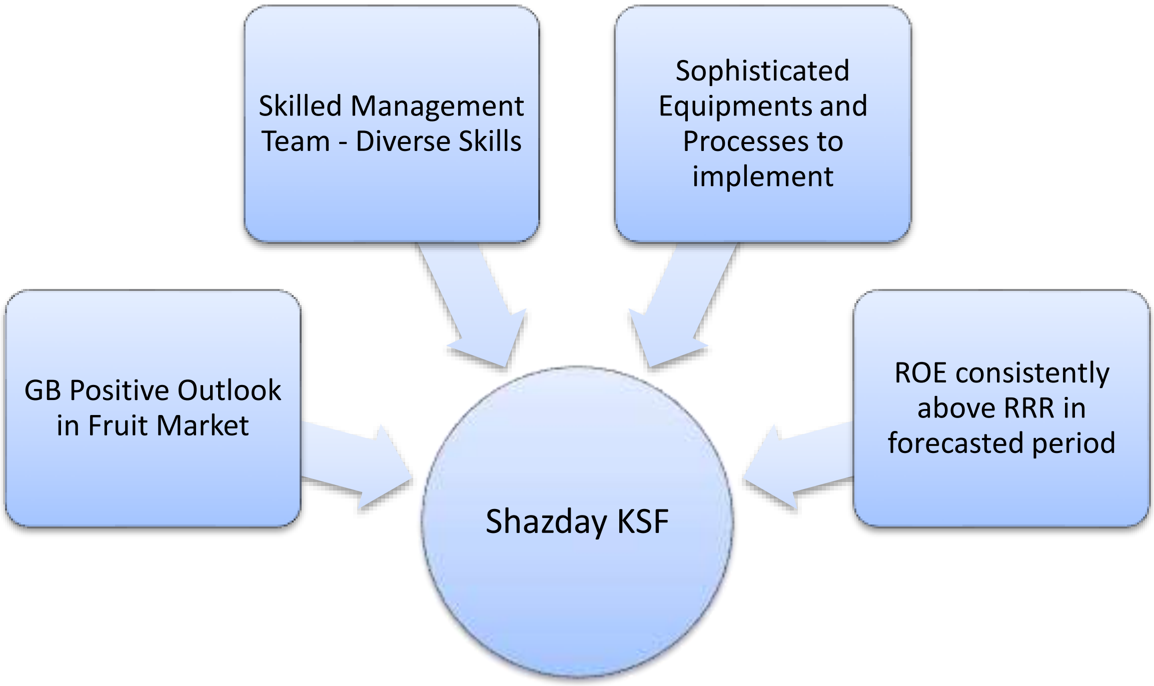
As per Management expectations and growth rate at which Shazday will operate in future, it is expected that in FY23 Shazday must increase its capacity to maintain the growth rate. Therefore, in FY23, certain additions have been made in Buildings & Vehicles head of Fixed Assets based on Management expectations and useful life of the asset. Tools having very small useful life are frequently repurchased after every two year since business activity increases and more harvesting & processing functions require more tools to operate efficiently.

Capital & Payout

With initial investment of Rs.22 million based on business growth and forecast prepared we believe the need for additional finance or capital injection in future is considerably low since cashflows over the years have remain well above the benchmark requirement of management. Payout ratio remains constant at 85 pc. and 15 pc. of Net Income is transferred to Retained Earnings to act as a cushion for unexpected losses in future. Since our forecast assumes solid growth for Shazday based on management stance, corporate governance & industry outlook so we believe there is very low risk of Shazday being exposed to any Net Loss situation.

4.3 Investment Summary

Shazday's strong outlook is based on number of factors due to which it's a startup that requires initial investment of Rs. 22 million, a quite unusual amount of initial investment figure for start-up in Pakistan considering the dominant Risk averse culture of investors in Pakistan. The key triggers are: -



1. Economic growth and development in Gilgit Baltistan
   In GB and tribal areas economic development has played a key role in increasing the average livelihood and earnings of inhabitants and with introduction of CPEC leading to improved infrastructure and development in transport and logistics, Shazday growth potential seems high as currently under contract are 1,000 trees which are expected to be increased to around 1,600 trees by FY27 through exploring of new accessible areas to work on and improved negotiations skills with passage of time.
2. Skilled pool of resources
   Human Resource is the key asset of any business and SHazday based on the skillset that its core-team possesses Shazday has sound corporate governance which is one of the key drivers for business growth and sustainability. With people from diverse range of expertise, this team can formulate business strategy that can aim at long-term growth due to which our forecast has considered this factor and it is believed that FY27 Net

Income shall be at Rs. 49 million from Rs. 5.75 million in FY18 which shows CAGR of 26.9 pc.

3. Use of better equipment and infrastructure

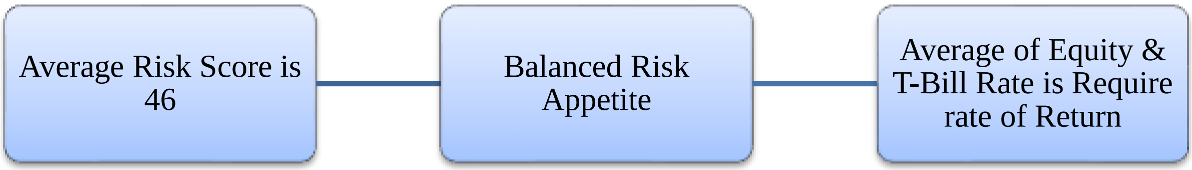
   With use of better equipment and latest technology and using latest means of harvesting and processing the fruit, the average yield per kg for Shazday is well above industry average and is expected to reach at 60 kgs/tree by FY27. Currently, yield is 43 kgs/tree which 4pc. above industry average yield of 41 kgs/tree. Shazday aims to use Manure (fertilizer) and Pheromone Disruptors as pesticides, which are highly effective in fighting pests, thus average yield is likely to increase thereby increasing production and annual sales growth.

4. ROE well above RRR

   Annual ROE has consistently been well above RRR of 17.17% over the entire forecasted period due to which in our Residual Income has throughout remain positive in forecasted period. Moreover, over the forecasted period ROE more than doubled i.e. increased from 24.5 pc in FY18 to 59.7 pc in FY27, which means a sound investment return and strong Book Value of Equity which is reflected in Shazday's enterprise value standing at Rs.112 million (DCF valuation).

4.4 Valuation

The overall risk appetite of the owner was balanced due to which the average Required Return that investor of Shazday seek was 17.17%.



Discounted Cash Flow Valuation	Terminal Value at Rs. 196 million
	Prepertuity Growth Rate at 3%
	Required Rate of Return is 17.17%
	Pre-Illiquidity Adjustment Valuation is Rs. 93.7 million
	Illiquidity Discount at 11% and Country Risk Premium (Pakistan) at 8%
	Entreprise Value at Rs. 76.4 million
	Initial Investmetn of Rs. 22 million so showing upside of 347 pc.

Residual Income Valuation	Terminal Value at Rs. 178 million
	Prepertuity Growth Rate at 3%
	Required Rate of Return is 17.17%
	Pre-Illiquidity Adjustment Valuation is Rs. 93 million
	Illiquidity Discount at 11% and Country Risk Premium (Pakistan) at 8%
	Entreprise Value at Rs. 75.4 million
	Initial Investmetn of Rs. 22 million so showing upside of 343 pc.

4.5 Investment Risks

Industry Risk

Industry risk is inherent for this business as it is based on harvesting. They invested a huge capital to start it and they need more to sustain the smooth flow of operations. Moreover, in order to compete and sustain in the market, they have to manage prices and might need to lower their margins.

Supply Chain Risk

To get the fresh supply of fruits, they have signed contracts with farmers of Skardu that they will provide the specified amount on specified date. Farmers might not be able to supply the required amount on given date so this might affect their supply chain. Managing this is crucial as late delivery might infect their reputation in the industry.

Natural Disaster

There is a huge chance of occurring any natural disaster as their farms are based in Gilgit-Baldistan which is known for its harsh weather conditions. Therefore, productivity might decrease if anything bad happens in that area.

Government Regulation

Government of Pakistan is focusing on developing GB and might introduce new policies. New government projects might affect the farming areas and this will affect Shazday's business. Tree cutting policies and development projects are big concerns here.

Competitor Risk

Many competitors are already operating in this industry. They know this industry well. As Shazday is a startup, they might lack in the knowledge and knowhow of the industry. Competitors might play price games with them in order to get the market share.

CHAPTER 5

Mauqa Online

5.1 Startup introduction

Mauqa Online is developing online tools for illiterate people. It is a service base startup i.e. a website currently providing household help and serving unprivileged workers of Islamabad by connecting the customers (those who need workers on short-term basis) with the registered workers. The main work is to identify any demand arising for short-term workers in Islamabad and responding to the demand by immediately providing verified temporary workers to the respective customers who can perform various tasks like cooking, cleaning, ironing, washing, babysitting etc. This business operates on short-term basis instead of permanent placements of workers. Order are made online through Mauqa Online website and Facebook page and employees book themselves using the worker's application for finding the work. Some important components of this business are:

- NADRA Verification: Verification of each worker's CNIC with NADRA
- Digital thumbprints: Records of each worker's thumbprints for further safety
- Interpersonal Skills: Interpersonal skills training for the workers to give customers a comfortable and professional experience
- Employee Ratings: To monitor the performance of the workers, each employee is required to be rated by the customer and the owners then enquire from the customers about any downgraded ratings

5.1.1 Owner's profile

Two owners namely;

- Muhammad Mustafa
- Suniya Saadullah Khan

Background of owners

- Suniya: Formula 1 engineer. Finishing a PhD in Aerospace Engineering
- Mustafa: 10+ years doing Marketing/Management for the telecom sector

Educational degree, institute and year of graduation

- Suniya: Institute of Space Technology, Pakistan (PhD); Cranfield University and University of Sheffield
- Mustafa: GIKI, LUMS, Stanford University

5.1.2 Risk Aversion

Balance to Aggressive

5.1.3 Compensation at an alternative non entrepreneurial job

1. Suniya: Rs. 300,000 / month
2. Mustafa: Rs. 800,000 / month

5.1.4 Entrepreneurs assets invested at the beginning –monetary value

PKR 300,000

5.1.5 Return sought by the entrepreneur

Tenfold

5.1.6 Rounds of venture cap investing

$110,000 funds from Stanford with 5% inflow each year.

5.2 Competitors

Sahulat.pro

Sahulat provides domestic and office help by providing cooks, maids, drivers, servants/helpers, nanny/babysitters, nurses, gardeners, watch guards, cleaner/sweepers and office staff. Also provides permanent workers as well as hourly service. Moreover, it has state of the art verification, processing and monitoring systems. Compared to Mauqa Online this is a well established, more extensive business serving in more areas and providing greater variety of services.

ForiMazdoori

ForiMazdoori is a digital service that helps connect labor with potential employers through smart-phone apps, website and SMS based services. It is a worker welfare system designed to transform how a person finds work. It bridge the gap between an employer and a worker by providing an easy to use online system for searching and hiring everyday workers such as drivers, maids, electricians, and plumbers, among a host of similar blue-collar / non-formal professions. Again this a well-established and bigger competitor for Mauqa Online.

Sukoon.pk

Sukoon is an online one-stop solution for home repair and maintenance services providing electricians, plumbers and carpenters, A.C technicians, painters, masons right at the doorstep. This is an indirect and potential competitor for Mauqa online when Mauqa expands to other cities and adds more to the services offered.

Other potential competitors: The Handyman, Caterers.

5.3 Assumptions

Management Stance

The owners of Mauqa Online seem to have an aggressive approach towards expansion and growth, considering their plans and goals. Both the owners are determined in helping the unprivileged workers find work for themselves and fulfill their needs. They both came back from abroad especially to work on this idea and make a difference in the society. Initially Mauqa Online started with the website and Facebook page and manually booked the workers after receiving orders, however soon after that, within months, a worker's application was developed to assist the workforce specifically. The application has been developed by the owners for routing of workers, similar to the software used by app-based services like Kareem and Uber. This app uses icons and audio to assist the illiterate employees at Mauqa Online who are not familiar with the internet usage. Hence when customers book their orders, this app helps the workers find the work and book themselves, despite not being able to read and write. Moreover, within months another service of babysitting was also introduced. Hence, the owners have plans of adding on many more services and expanding to other cities of Pakistan to help workers that are more unprivileged and make a difference. Therefore, the assumptions in this model have been based on this management stance.

Revenue

The revenue for Mauqa Online is derived from two streams

1. Hourly demand
2. Full day demand

The orders for temporary workers are taken through two channels i.e. Facebook page and website hence the major demand driver has been taken as the number of people active on the Facebook page and website. For the purpose of projections of active users, the actual data for first 6 months has been taken and extrapolated for the whole year i.e. 2018. These users have been grown at the rate of users joining in the first year, for next four years. For the next 5 year period the increase has been taken as half of the growth in first five years due to the assumption that large portion of the market will be captured in the beginning five years as the owners plan to expand to other cities and add on more services once the business is established in terms of profits.

The next component is demand of hours per day for the year 2018. This has been computed in three steps. Firstly, the actual maximum and minimum hours per day have been identified for the first 2.5 months, leading to an average per day number of hours. In the second step, the actual total number of hours for the first 2.5 months have been identified which has been converted into per day orders. To arrive at the final figure of per day hours, an average has been taken of the aforementioned per day figures giving the final per day number of hours demanded in the first 2.5 months. This figure has then been annualized giving the total hours demand for 2018.

	First 2.5 months
Max hours per day	25
Min hours per day	10
Avg per day	17.5
Total hours	1000
per day	13.33
Final per day avg	15.42

Using the active users for 2018 and total hours demanded in 2018 the demand (hours) per person have been computed for 2018. This figure has been kept constant for throughout the projection assuming that on average one user will demand the same number of hours, while increasing the active users each year, as explained earlier. Through these two components, the total demand projection has been done by taking the product of active users and hours demanded per user for each year 2018 onwards.

Demand	High	Stable	2018	2019	2020	2021	2022
Avg Demand number of hours			5,395.83	10,791.67	16,187.50	21,583.33	26,979.17
Active on facebook/website	1000	500	1,000.00	2,000.00	3,000.00	4,000.00	5,000.00
Demand (hours) per person			5.40	5.40	5.40	5.40	5.40

Pricing

Mauqa Online has two rates for its services

1. Per hour rate for hourly demand
2. Full day rate

These rates have been grown in line with inflation predicted for the upcoming years taken from the Pakistan Economic Outlook reports. An average of the two rates is taken to be applied to total forecasted annual hours to arrive at revenue.

Costing

- **Salaries**

The current salary of employee i.e. PKR 20,000 has been grown by 10% each year to account for the impact of inflation. The number of employees has been grown with respect to the growth in demand. Currently Mauqa has six employees on its payroll but the demand is much higher compared to the available workforce. Hence the projection for employees is in line with the demand projections. Using the current annual hours demand and current number of employees, hours per worker (annual) has been computed which is then converted to hours per worker (daily). This figure has been grown for the first five to reach at a capacity utilization of 40% by the end of 2022 and has been further grown to reach capacity utilization of 60% by the end of 2017. This forecast of hours per worker (daily) is then annualized again arriving at hours per worker (annual). Lastly, the number of workers is computed using the annual demand (hours) and the annual hours per work.

Cost Drivers Data	Increase	2018	2019	2020	2021	2022
Demand (hours)		5,395.83	10,791.67	16,187.50	21,583.33	26,979.17
Workers	increase with demand	6	11	16	20	24
hours/worker (annual)		899.31	950.02	1,003.60	1,060.21	1,120.00
hours/worker (daily)		2.57	2.71	2.87	3.03	3.20

- **Other Costs**

Other costs include expense of Nadra verification. Mauqa Online verifies each worker's CNIC with NADRA to ensure reliability and accountability. This is a fixed charge of PKR 50 and is linked to the number of workers. The customer that is then enquired by the owners by meeting the customer incurs travelling expense in case there is lower rating for an employee. Hence, an average travelling expense has been charged which has been grown in connection to the expected growth in petrol prices. This expense is linked to the number of lower ratings/complaints each year. Within the first 2.5 months, there was one case of complaint, which has been extrapolated for the year 2018. For the upcoming years these complaints have been reduced linearly and kept at constant 1 by the year 2022 and onwards with the assumption of experience and improvement in employees work and attitude each year, greater capacity utilization, better learning curve and hence fewer complaints.

Another cost incurred by MauqaOnline is the internet cost due to online-based operations of the business. The business is run through a Facebook page and website where customer interaction is carried out and orders/feedbacks are taken hence a permanent access of internet is required. For that purpose, a wireless internet device and its current rate has been used with the growth in its charges in line with inflation.

Another cost for Mauqa Online is the expense of phone calls made to the employees after receiving each order or to customers for customer relations. Even though workers find the work through the worker's application as explained earlier, however some calls daily need to be made on and off. For this purpose, each owner has been assumed to use a super card each month, which would cover the unlimited calls expense.

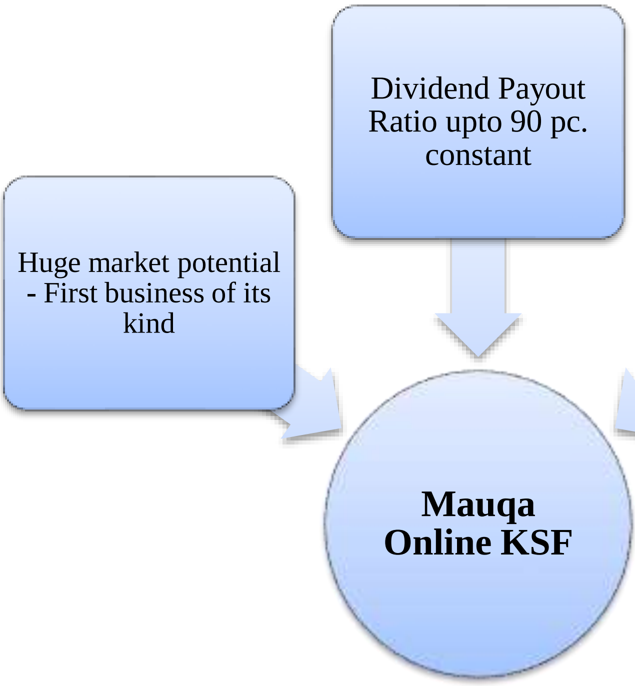
Assets, liabilities and Equity

The non-current assets for this business are two intangibles i.e. the website and the application. The application has been developed by the owners for routing of workers, similar to the software used by app based services like Kareem and Uber. This app uses icons and audio to assist the illiterate employees at Mauqa Online who are not familiar with the internet usage. Hence when customers book their orders, this app helps the workers find the work and book themselves, despite not being able to read and write. The development cost of this application has been PKR 250,000 whereas the website has been developed by the owners themselves incurring the only cost of domain i.e. PKR 700.

The third non-current asset is the laptops owned by the two owners for running the managing the business specifically customer interaction. Laptops have been charged a depreciation of 20% considering 5 years lifetime for each laptop after which they have been assumed to be fully depreciated and replaced by new ones.

This start-up is being operated totally on cash basis, having no plans of involving credit and other liabilities. The initial investment done by the two owners together is PKR 300,000. This start-up is also funded by Stanford University and backed by their Centre of Social Innovation. Stanford has granted funds of PKR 10,000,000, 7% of which has been injected initially in the first year and rest is to be added as per requirements. Furthermore, the dividend payout ratio for Mauqa Online has been kept at 90% throughout, keeping in view the dividend policy of the owners, which is to retain only 10% of the profits.

5.4 Investment Summary



Mauqa Online has potential of growth and performance as explained below

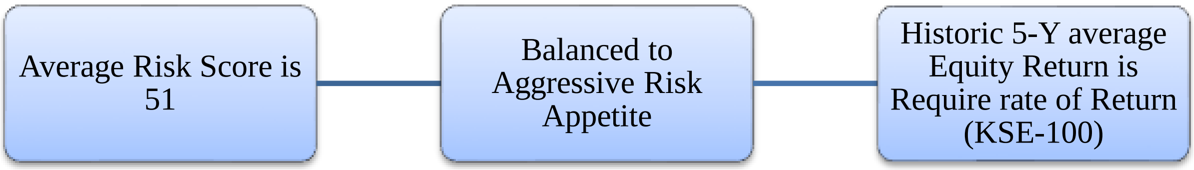
1. Considering the fact that issues regarding unexpected leaves of maids and domestic helpers are quite common now days, this business has potential in future as high demand exits for temporary workers on and off. Moreover, in wedding and event seasons, a need rises further due to increased workload and non-availability of temporary helpers conveniently which leads to helplessness of households who are then willing to pay a lot more than what Mauqa online is charging per hour. This start-up also plans adding more services and expanding to other cities easily, which can boost up their business

2. It has a constantly growing revenue trend and a growing net profit trend after the third year, even though net profit growth has not been in line with revenue growth also due to initial losses. However, A forecasted increase in NP margin from -18.29% to 26.28%, increase in ROE from -30.62% to 259.51% and increase in investment turnover from 1.28 times to 22 times signifying the potential of improved performance in the future and high returns per dollar invested.

3. Mauqa also has a dividend policy of 90% payout ratio, which results in a major income source for the investors other than the returns mentioned earlier

5.5 Valuation

The overall risk appetite of the owner is balanced to aggressive due to which the average Required Return that investor of Shazday seek was 26.35%.



Discounted Cash Flow Valuation	Terminal Value at Rs. 26 million
	Prepertuity Growth Rate at 3%
	Required Rate of Return is 26.35%
	Pre-Illiquidity Adjustment Valuation is Rs. 5 million
	Illiquidity Discount at 11% and Country Risk Premium (Pakistan) at 7.5%
	Entreprise Value at Rs. 4.10 million
	Initial Investmetn of Rs. 1.0 million so showing upside of 310 pc.

Residual Income Valuaion	Terminal Value at Rs. 29 million
	Prepertuity Growth Rate at 3%
	Required Rate of Return is 26.35%
	Pre-Illiquidity Adjustment Valuation is Rs. 5.6 million
	Illiquidity Discount at 11% and Country Risk Premium (Pakistan) at 7.5%
	Entreprise Value at Rs. 4.6 million
	Initial Investmetn of Rs. 1.0 million so showing upside of 356 pc.

5.6 Investment Risks

- **Industry Risks**

Mauqa Online seems to be a less risky startup with low initial capital requirement since the startup is operating online and mostly has intangible assets. However, this also counts as a risk due to low barriers in entry. Currently there are a number of established competitors in the market offering permanent solutions and vast category of services compared to this startup. Those competitors have also established their brand names and brand image which could lead to Mauqa requiring a number of years to come up to their level. Hence, Mauqa faces volume and demand risk due to these competitors as well as new entrants that could easily enter this market and affect future revenues and cash flows of Mauqa.

- **Technological Risks**

Since the operations of Mauqa are internet focused and orders are only being taken online through Facebook page and website, any technical issues and server malfunctioning could severely impact the daily revenues of the business. The internet system in Pakistan is not fully reliable, there are disconnectivity issues on, and off hence this imposes a major risk on Mauqa Online.

- **Liquidity Risk**

The workers are being paid a fixed monthly salary irrespective of the number of hours worked, hence any disruptions in predicted demand could lower the income while the business would still be incurring fixed salaries costs even when the workers are idle. This could cause liquidity issues for Mauqa Online.

- **Reputational Risk**

Employees are the key assets for this business. The operations of this business involve intense customer and employee interaction, which is risky as any one employee, through his performance, could make or damage the reputation of the business. This also works the other way round as any unfortunate incident with the employee at a customer's place could badly impact the reputation of Mauqa Online.

CHAPTER 6

The Wall

6.1 Startups Introduction

"The Wall" is a container based restaurant startup in NUST providing hygienic fast food to their customers. They serve a wide range of fast food products covering burgers, pizza and pasta. Initially three cafes were in operation but they did not serve such products, which "The Wall" is offering. Moreover, they majorly target students and majority of them are hostilities so they offer dine in as well as delivery service.

Considering the fact that customer want variety of options while dinning and they are on a tight budget, this business has potential in future as they are fulfilling both. They offer variety of products and at a much lower price as compared to the other restaurants operating nearby with the same menu. Moreover, with the growth in admissions every year and with the construction of new hostels, their demand will be increased. This start-up also plans to expand to other universities, as there is rarely any container based restaurant available in universities, which offers such menu in low price. In addition, they might expand to other cities other than Islamabad, which can boost up their business.

6.1.1 Owner's profile

Number of owners

1. Abdullah bin Farooq
2. Hassaan Dar
3. Rabia Shehbaz
4. Rana Danial
5. Huma Inayat

Background of owners

Abdullah bin Farooq

23-years old entrepreneur is from Sialkot, currently enrolled in BBA degree in Nust business school. He did his O levels from beaconhouse school system Sialkot and then moved to

Newland boarding school Lahore for his a levels. After completing 12 years of education, he took a gap year, worked with an event management company, and gained some experience. In an interview, he said that he would have been receiving 35 to 45 thousand rupees salary if he were working with some other company.

Hassaan Dar

Second owner of this start-up is from Gujrat. He did his O levels from Jinnah public school Gujrat and then moved to Beaconhouse Lahore for his a levels. After this, he took two gap years and helped his father in his family business. Currently he is doing BBA from NBS. He said he might have received 35-45 thousand salary if he was working somewhere else.

Rabia Shehbaz

She started her educational journey from her hometown Chinot, Jehlum. She passed her secondary school from Fauji Foundation School Jehlum and then moved to Islamabad for O&A levels. After completing O&A levels from OPF boarding school, she was enrolled in NUST and currently she is doing her bachelors. She said she would have been receiving a salary of 45K if she were working somewhere else.

Rana Danial

Belonging from Sialkot, Danial started his educational marathon from his own city. After completing O levels from Beaconhouse Sialkot, he moved to Newlands boarding school Lahore. Currently he is also enrolled in BBS, NBS. He said he would receive a salary of 50k if he were working somewhere else.

Huma Inayat

22 years old girl descends from Swabi, KPK. Initially, spending 17 years in Kuwait and after schooling shifted to Pakistan and did her FSC from Peshawar. After a gap year, she joined NBS-NUST opting BBA program. She expects a salary of 50k if she would have been working somewhere else.

Coefficient of relative risk aversion

Balanced

Entrepreneurs assets invested at the beginning –monetary value

All of them invested equal amount comprising 1,500,000 PKR.

6.2 Competitors

Concordia-1 & Concordia-2

These are two major competitors of this restaurant as they are oldest and well-established cafes. Another advantage of C1 and C2 is that they are allowed to open from 9:00 A.M onwards but Wall has opening time restriction. They start operating from 1:00 P.M onwards. Another advantage, which these cafes has over Wall, is the menu. They offer more products than Wall and at competitive prices. Both cafes are reachable from every school of NUST unlikely of Wall, which is only easily accessible to six schools only.

Café Jango:

Raja Sayyaf who is an alumni of NUST started this restaurant. It is similar to the wall as it's also container based restaurant start-up. Although both cafes have entirely different menus. Jango is situated near boy's hostel and Wall is near girl's hostel. Unless someone wants to eat something special, boys prefer going to Jango as its near to them and girls to Wall.

Café 309:

Similar to café Jango and Wall it is also managed by three final year students. It is situated near C2 and offer items similar to café Jango and Wall. Their main items are paratha rolls and shakes which no other start-up in NUST is offering.

6.3 Assumptions

Management

Wall was started when NUST administration opened tender offer for container based cafeterias. 5 students who are currently managing this business grabbed this opportunity. They are operating with the aim to provide a wide range of quality ensured hygienic food to Nustians at a much lower price as compare to others. Owners have segregated their duty hours and all of them give their best to provide the lavish dine in experience to their customers. When it comes to facilitating the customers, Wall is not behind its competitors. They have started free delivery service after the curfew hours for hostilities. Currently they are operating inside NUST. Considering this fact, they cannot expand yet due to restrictions imposed by NUST admin. However, they have plan to expand by introducing similar idea to other universities as well in long run. Their mission is to provide lavish fast food to students at a reasonable price as students are on a tight budget. When it comes to expanding, it is much easy for them as the startup cost is low as compare to other businesses. Each owner contributed equal amount and are equally partners in profit and loss. Therefore, in future, if they plan to expand, they can easily take steps towards growth.

Revenue & Sales

There are three main items, which generate revenue for Wall i.e. fast food items, side orders and beverages.

Fast food:

It is assumed that in first quarter under normal circumstances and regular semester, the average sale of burger is 100 per day as its wintertime and there is no inside sitting facility available so mostly students tends to stay inside the hostels and prefer delivery. In 2nd quarter orders increase as of spring season. Due to summer vacations in quarter 3, the sales and order decreases as a huge number of students go back home so it is assumed that only 30 orders per day will be received. In quarter four number of orders again rise due to the entry of new students. Moreover, initially the growth rate for the first five years is assumed to be 10% and then 5% after that. Logic behind this is that as this is a start-up and usually such start-ups show high growth in starting years and then their growth becomes stable as the business reaches its maturity after facing a dip.

Beverages:

We assumed that there would be one beverage order for every two main course order because people usually do not buy beverage on each order. In first and fourth quarter, due to winter season, people mostly avoid cold drinks so the demand is less during these time periods. The demand for beverages is dependent on the fast food so the fluctuations in the number of orders per day fluctuate and grow accordingly.

Side orders:

Average side orders per day are assumed to be 50 in quarter one and 4. This number decreased in 3rd quarter due to summer. The growth rate is assumed as fast food's rate and reason is explained earlier.

Working days

Wall remains operational throughout the regular semester for 13 weeks but in summers due to Ramzan, they take one moth off as per their policy. We assumed that they would follow the same schedule throughout.

Mark-up

As per their own policy, the mark up is assumed 20% on fast food & side orders and 10% on beverages. Usually they do not prepare beverages so mark up is low in order to compete with other cafes.

Labor

There are four workers including a head chef, cook, delivery boy and waiter. As they will be operating inside NUST only and not planning to expand so, this is assumed that this number will remain constant. An increment of 10% is assumed in their salaries as per their contract signed with the wall while joining.

Remuneration to NUST

According to NUST's policy, they have to pay 4.5% of their revenue as rent to NUST administration. This rate is also kept constant, as they are not expanding their operations inside NUST.

Depreciation & Amortization

There are four categories of assets and their rules of depreciation are stated below:

Land & Building / Container:

The average life of a container is 12 to 15 years so on the basis of straight-line method, the depreciation rate is assumed to be 8%. Moreover there 20,000 will be charged after 3rd year for every two year on the maintenance like paint and other stuff.

Furniture & Equipment:

Depreciation rate for furniture and equipment is assumed to be 25% on reducing balance method. The rate is high as their sitting is outside and furniture is directly exposed to sun and weather. Furthermore, there will be 50,000 charged for every two year for buying new equipment and furniture as these things are used daily and there are high chances of occurring any damage to them.

Intangibles:

Currently they are using a custom-made software for order taking and it is assumed that the depreciation rate for this will be 20% as mostly intangibles are being depreciated on the same rate. After some years, they might need some updated software in order to enhance their efficiency. It is expected that they might need this thing after every five years as their menu items might change.

Computer equipment:

They own a computer and an order slip printing machine. It is also placed inside the kitchen so there are chances spilling something on it. Therefore, the depreciation rate is assumed to be 25% and an addition of 40,000 and 50,000 is assumed in 4th and 8th year.

Utilities & Bills: Growth rate for these items are adjusted as per inflation and risk of premium increases by govt. on these services is also incorporated so based on that 10 pc. Growth rate is calculated.

6.4 Valuation

The overall risk appetite of the owner is balanced due to which the average Required Return that investor of Shazday seek was 17.17%.

Discounted Cash Flow Valuation	Terminal Value at Rs. 14 million
	Prepertuity Growth Rate at 3%
	Required Rate of Return is 17.17%
	Pre-Illiquidity Adjustment Valuation is Rs. 7 million
	Illiquidity Discount at 11% and Country Risk Premium (Pakistan) at 7.5%
	Entreprise Value at Rs. 5.76million
	Initial Investment of Rs. 1.5 million so showing upside of 384 pc.
Residual Income Valuaion	Terminal Value at Rs. 10 million
	Prepertuity Growth Rate at 3%
	Required Rate of Return is 17.17%
	Pre-Illiquidity Adjustment Valuation is Rs. 5.6 million
	Illiquidity Discount at 11% and Country Risk Premium (Pakistan) at 7.5%
	Entreprise Value at Rs. 4.5 million
	Initial Investment of Rs. 1.5 million so showing upside of 303 pc.

6.5 Investment Risks

- **Competitor Risk:**

Wall is a small scaled restaurant based in container so initial capital requirements are much lower than other restaurants operating in the same industry. Entry barrier is low from capital requirement perspective so they are exposed to competitor risk. Competitors might affect the revenue stream of this business.

- **Operational risk:**

Every business is open to such kind of risks. There is a possibility that operations of restaurant might get affected by suppliers or other factors on which restaurant is dependent. For example, supplier might delay the delivery of raw material or increase the price. Moreover, kitchenware might malfunction sometime.

- **Reputational Risk:**

Reputation is very crucial for such ventures as quality and health are very important. Their reputation would be at stake do not focus on quality and hygiene.

- **Regulation Risk:**

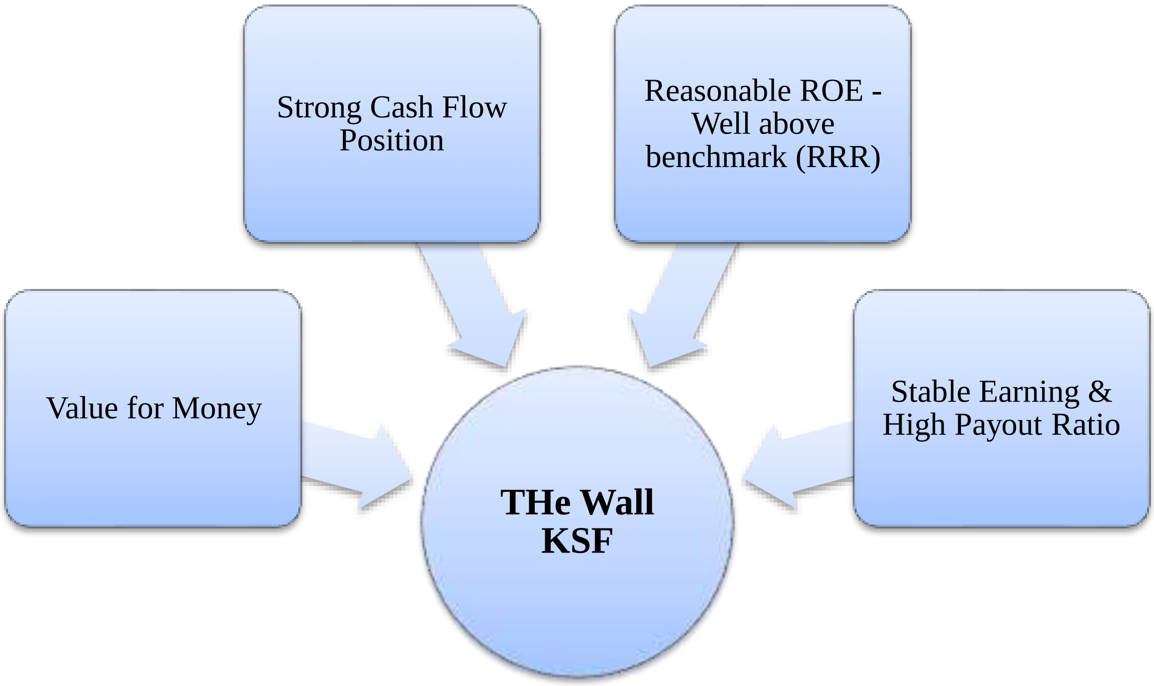
Operating under the strict rules of NUST admin, they might face this risk. Nust might introduce new policies or they might have to renew their contract after sometime and tender might slip from their hand.

- **Employee Turnover Risk:**

Recently, Wall faced the issue that their all workers left without informing. They had to find new workers and again train them to meet the required taste and quality. This is a huge risk as operations are directly dependent on chefs and cooks. Therefore, they need to take measures to overcome this risk.

6.6 Investment Summary

One of the leading restaurants among three restaurant startups and showing significant performance against official NUST cafes which have been continuously slacking in terms of quality and value for money, The Wall has made a successful landmark in NUST history of dine in and take away for fast food restaurant at NUST.



The key triggers for its tremendous performance in this sector is due to following reasons: -

1. Value for money
   With an average price of around Rs.250, a customer enjoys delicious fast food burgers, which are acknowledged by majority as compared to other restaurants within NUST as wells as outside NUST, which deliver the same quality food with average price above Rs.400 like KFC or Hardees. This USP has led to tremendous sales growth of around 10 pc. In volume, whereas prices are expected to increase by in line in with inflation only around five pc. To maintain this unique selling preposition.
2. Strong Cash Flow Position
   Cash flows has been increasing at CAGR of 22pc. In FY17Q1 cash flow as percentage of total assets was around 15 pc. Which increased to 82pc. By FY27Q4 which signifies strong cash position.

3. Reasonable Return on Equity

   In FY17 ROE was about 17pc. Which is expected to increase to 76 pc. By FY17. From FY22 onwards it is expected that ROE shall be well above 50 pc. Which means an ample return on each dollar invested by shareholder.

4. Stable Earnings & High Payout Ratio

   With Margins expected to remain fixed in upcoming years and prices increasing in line with inflation rate and compensating all the increase in prices of COGS, Admin & labor Expense Operating and Net profit margin are expected to remain stable with minor growth, which means shareholders can expect constant stable return annually. Moreover, Payout Ratio with as high as around 95 pc. is maintained which is in direct interest of increasing shareholder wealth and making them satisfied.

Epilogue

The underlying idea behind the project was to evaluate the Start-up Industry of Pakistan while simultaneously focusing specifically on four start-ups to come up with their intrinsic values. Therefore, this report underlines the need to develop understanding of the startup valuation in Pakistan while supporting the existing literature that startup valuation is a complex process and requires extensive research.

Considering the Start-up Industry of Pakistan, it is evident that very little research papers and studies are available regarding the Industry as a whole or the start-ups. This study aims to develop a comprehensive understanding of the Start-up industry while valuing four Start-ups to give readers an idea as to what is the mechanism behind valuing start-ups.

In addition, Start-ups tend to show losses in their first years, which can discourage investors and sometimes the owners themselves. This Study, employing various valuation methods and assumptions, which were different from conventional valuation mechanism, aims to develop and understanding that the true potential of a start-up can only be realized through extensive research. This Study proves the aforementioned notion as the Start-ups being valued showed significant losses in their initial years but were in a healthy financial position by the end of the valuation period.

As the existing literature suggests, venture capitalists tend to focus on one segment or industries while investing. Our study highlights the potential of Start-ups from multiple market segments and therefore, supports the idea of developing a diversified portfolio for the venture capitalists.

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Appendix