LSE IRG Venture Capital

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Introduction to Venture Capital

Introduction to the basic terminology of what Venture Capital is and how it fits under Alternative Investments as a private equity investment. What the aims of Venture Capital are and how Venture Capital achieves high returns in the competitive market with so many start-ups present.

The Start-up Perspective

Looking at the start-up and how it operates. How they plan to approach the fundraising process and the levels of funding that they are likely to receive at different levels.

Fundraising

In depth look into different types of fundraising and types of investors from Angel Investors all the way to the IPO or buyout buy other private equity firms. [3]

Consulting Frameworks applied to Venture Capital

Porter's Five Forces, The 3 Cs, The 4 Ps, SWOT analysis along with other frameworks that might be considered when assessing a company's performance and potential for growth.

Growth Strategies

How does the company grow alongside venture capital? This section will explore the growth paths of successful start ups under the guidance of big name VCs. [5]

Exit Strategies

We will look at the various ways in which Venture Capital firms plan an exit from their investment. This will mostly cover secondary buyouts and IPOs as exit strategies. [6]

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0 Introduction to Venture Capital

Below is a brief introduction into Venture Capital. I aim to go into the history of Venture Capital, the very basics of what Venture Capital is and some of the introductory trends in the Venture Capital world.

0.1 History of Venture Capital

Venture Capital is a subset of private equity, which can be traced back to the 19th century. However, Venture Capital only developed as an industry after the Second World War. Georges Doriot from Harvard Business School is considered the Father of Venture Capital as he started the American Research and Development Corporation (ARDC) in 1946.

He raised a \$3.5 million fund to invest in companies that commercialised technologies developed during WW2. For example, ARDC's first investment was in a company that had ambitions to use x-ray technology for cancer treatment. The \$200,000 that ARDC invested had a return of \$1.8 million when the company went public in 1955.

After the Investment Act of 1958 was passed, access to capital became a lot easier for investment purposes as small business investment companies could be licensed by the Small Business Association. This qualified PE fund managers and provided them access to low-cost, government-guaranteed capital to make investments.

It became big in the Bay Area in California where private equity firms in that region set the standards of practice used today. This involved setting up limited partnerships to hold investments where professionals would act as general partners and those supplying the capital would serve as passive partners with more limited control.

Venture Capital began posting losses after the 1980s with the most notable period of serious busts occurring during the time frame known as the **Dot-com Bubble**. This was the time where companies with any semblance of relation to the booming internet were given vast amounts of cash to expand their businesses. Most of these companies ended up failing to make a return for the investor causing serious and heavy losses.

0.2 Understanding Venture Capitalists

The basic idea of Venture Capital is to pool money from wealthy individuals, pension funds, foundations and corporations to invest into early-stage start-ups. The money that is pooled is controlled by a Venture Capital Firm that manages and directs investments. All investors (i.e. people who have put in money) have part ownership over the fund however, they are limited partners whilst the firm itself is a general partner which has control over the funds invested.

Compensation within Venture Capital follows a similar structure to most Private Equity of Fund Management formats with a **2 and 20 split** meaning a 2% annual management fee with a 20% take on profits for the managing firm.

Here is a list of some famous Venture Capital Firms which might sound familiar: ¹

- Benchmark Capital (AirBnB)
- Menlo Capital (Uber)
- Andreesen Horowitz (Instagram)
- Sequoia Capital (Whatsapp)
- Accel Partners (Facebook)
- Creandum (Spotify)

0.3 Positions

Here are some example positions:

0.3.1 Analyst

The lowest position at a VC firm, usually graduates out of college or university. Their focus is number-crunching. Analysts screen business plans before passing them to Associates and senior staff and conduct due diligence or research on promising industries and entrepreneurs. Quantitative backgrounds such as Engineering, Math, Economics, or Statistics are also strong backgrounds for the typical Analyst roles.

 $^{^1\}mathrm{Find}$ a list of these VCs and their backgrounds in the appendix **VC Firms**

0.3.2 Associate

Associates are usually gate-keepers for top managers of a venture firm. Their primary functions are to source new deals and support existing investments. In large firms, many Associate positions have an 'analyst' position below them. Associates also get the chance to network with entrepreneurs and watch the trends within their firm's industry focus.

Traditionally, associates are usually ex-bankers, consultants, investment professionals (i.e. private equity, other VC funds) or operational leaders with three to five years' experience, sometimes with an MBA or a PhD. However, many top tier venture funds also hire engineers, or operations or product managers with strong technical backgrounds.

Commonly, VC firms hire associates for two years only, meaning there is rarely an opportunity for internal advancement at a VC firm. Both senior and junior associates do not usually have the authority to lead investments and sit on boards, thus, they often join a startup in an operating role or go to business school after their contract expires. However, in some firms, an Associate position can lead to a Principal position as noted above.

0.3.3 Principal

Principals are typically expected to be a source of high quality deals. Principals are usually full-time employees who are expected to perform such additional functions as investor relations, negotiating partnerships for portfolio companies, management of a fund's community, etc. Principals at most firms have the authority to lead their own investments and sit on boards, however, they rarely have a vote on deals and only about half of them have direct fund carry, commonly being compensated from the overall performance of the fund.

0.3.4 Managing Partner

Many venture firms call them 'partners', some call them 'managing partners/directors'. You can also see such titles as 'founding' or 'co-founding partner'. These are the true GPs of the firm who may also have their names on the door. General partners raise the money for the fund, but also contribute a small amount of their own money to it. They make the final decisions on which companies to invest in and take seats on boards. They hold main stakes in the anticipated carried interest and have the highest compensation at a firm.

At large firms, however, some general partners tend to be less involved in the daily deal-making and are more focused on high-level tasks such as identifying key sectors to invest in, giving the green light for investments and exits, networking at a high level, representing the overall firm, raising money for the next fund and communicating performance to investors.

0.4 Examples

Below are some examples of Venture Capitals which have succeeded in great fashion:

- Sequoia Capital's \$60m investment into **Whatsapp** turned into \$3bn after **3 years** due to the Facebook Acquisition. That's a 50x return.
- Accel Partner's \$12.7m investment into **Facebook** turned into \$9bn after **7 years** with Facebook's IPO. That's a 708x return.
- Creandum's \$4.5m investment into **Spotify** turned into \$370m after **11 years** with Spotify's IPO. That's a 80x return.

In typical investment, returns are calculated on percentage. A standard rate of return for a Private Equity fund would be around 20 to 25%. For Venture Capitalists, returns are focused on numbers a hundredfold larger. This is why it can be very lucrative.

0.5 Summary

To take away, here are the key points of what a Venture Capitalist aims to do:

- Find firms which are disrupting the market through their product or service
- Invest in these firms to help them grow i.e. capture more of the market, expand internationally etc.
- $\bullet\,$ Get a heavy return from their success

Venture Capital is difficult because you're investing in a plethora of firms just to get one hit. However, if that hit is large enough, the returns often offset the other failures as seen by the examples above.

1 Start Up Perspective

This section looks into the start-up perspective and why Venture Capital is crucial to a lot of start-ups. We will consider some global trends and the type of firms which start-up and require venture capital funding. The key word to recognise for VCs is usually **disruption** because that means that these firms will be making a **significant impact** on the market locally and, with expansion, globally.

1.1 Global View

Here are some critical focuses that the VC's are currently targeting where about 70% of VC money is directed:

- Software (SaaS, Products)
- Biotechnology
- Medical Devices
- Telecommunications
- Hardware e.g. chip-makers

Hence the start-ups in this space are the most popular for VCs to target. This is because they are in a high-growth market with a lot of opportunity to capture market share.²

1.1.1 Software

Software is a much broader topic and can cover a lot of bases. To a certain extent, a lot of sharing-economy technology is based on software and has proven to be very disruptive as the traditional model of ownership has been cast aside. Other types of software has also been developed to make processing payments and data much easier. For example, **Stripe** has made payment processes a lot easier with just a few lines of code.

Below are some examples of Software start-ups who are now booming in the industry:

- Slack
- Asana
- Stripe
- •

1.1.2 Biotechnology

1.1.3 Medical Devices

1.1.4 Telecommuications

1.1.5 Hardware

Hardware is mostly about efficiency whereby we try to increase our levels of output with a smaller amount of resources. Alternatively, hardware is created to make activities much easier or more interactive which brings new types of experiences to consumers. Recent developments in hardware have been dedicated to increase computing power, as seen by the likes of Intel, Nvidia and Qualcomm amongst others, whilst companies such as Fitbit, GoPro and Oculus aim to provide an experience.

Below are some examples of Hardware start-ups who are now dominant in the industry:

- Nvidia (Sequoia Capital [A]³)
- Fitbit (Uncork Capital [A] and True Ventures [A])
- GoPro (Riverwood Capital [A])
- Square (Khosla Ventures [A] and Sequoia Capital [B])
- Oculus (Crowdfund, Spark Capital [A] and Matrix Partners [A])

The list goes on. All these firms, stretching from the early 2000s until now, have become household names in their technology. They disrupted the market in some way or form due to their Unique Selling Proposition (USP) founded on making computers faster (Nvidia), making tracking our health easier (Fitbit), capturing our moments with more clarity (GoPro), easing our payments (Square) or even changing our reality (Oculus).

Their USP isn't the only reason for their success, many companies have tried the same path before. They were simply better positioned to begin with and managed to convince the VCs they approached that their product was worth selling. They would have had the traction to back it up and the projected finances to show that extreme growth on their end would be possible.

²This is expanded further in **Consulting Frameworks in VC** through the BCG Growth Matrix

 $^{^3}$ Letters indicate the Series round in which they funded the start-up

Venture Capital 2 FUNDRAISING

2 Fundraising

This section will dive into the fundraising aspects of venture capital from the VC itself, looking to raise capital to put into start-ups and from the start-up, looking to raise capital at various stages with various investors.

3 Consulting Frameworks in VC

This section is broken into the various frameworks that can be applied when assessing a company and it's competition. Here are some key ones to remember and which will be gone into depth in the section below:

- Porter's Five Forces
- The 3 Cs
- The 4 Ps
- SWOT Analysis

Other analytical frameworks which are more general can be found in the **Appendix of Consulting Frameworks.** This includes but is not limited to the Product/Market Grid and the BCG Growth Share Matrix along with some additional analysis concepts such as Break-Evens, Net Profit margins and Return on Investment (ROI).

Note that these frameworks are used to structure your analysis and pitches rather than to be stuck to religiously. These are here to help illuminate whether or not a firm has a good product that would be worthwhile investing into.

3.1 Porter's Five Forces

This is probably the most known framework used in business strategy worldwide and was created by Harvard Professor Michael Porter. This is a high-level framework i.e. does not dive into the specifics too much, that you can draw upon to perform a market landscape and competitor analysis.

It can help determine whether a market or company is attractive, whether the client for whom the analysis is being performed is a private equity firm thinking about buying a company, or a major company thinking about entering or exiting a certain market segment. - Street of Walls

Items of analysis are listed below:

- Threat of New Entrants
- Competitive Dynamics
- Supplier Power
- Consumer Power
- Threat of Substitutes

3.1.1 Threat of New Entrants

Effectively we can recognise these as barriers to entry i.e. how easy it is for new firms to enter the market and threaten the position the analysed firm is in **or** how hard it is for the analysed firm to enter the market and whether or not it would make as much of an impact. Below are some key things to consider:

- Legal or regulatory barriers
- Economies of scale
- Cost advantages (not EoS but unique access/deals with raw materials as an example)
- Access to distribution channels
- Product differentiation

3.1.2 Competitive Dynamics

This is more suited to understanding the industry landscape and how that might have an impact, whether it be large or small, on the firm. Below are some key things to consider:

- Industry growth rate
- Industry fragmentation i.e. perfect competition or oligopolistic?
- Level of switching costs i.e. changing products from one company to another from the consumer perspective
 and its impact
- Motivation to reduce prices e.g. excess capacity

3.1.3 Supplier Power

This is more an understanding of how well the supplier is positioned and how much influence it has over the market. Below are some key things to consider:

- Level of substitute products
- Buyer's decision influenced by supplier
- Supplier inputs/products switching costs
- Supplier has potential to forward integrate i.e. organic MnA
- Supplier accounts for large share of the inputs/products (link back to uniqueness)

3.1.4 Consumer Power

This is more an understanding of how well the consumer is positioned and how much influence the consumer can have over the market. Below are some key things to consider:

- High customer or client concentration
- Level of commoditization of inputs/products i.e. treating them as mere commodities or having an added value component attached
- Level of switching costs for buyer
- Buyer has significant product or market information

3.1.5 Threat of Substitutes

This is self-explanatory to a large extent. It is a key focus on competition in the current market before new entries or exits i.e. how is the landscape looking **now** and where the firm is positioned in said landscape (or aims to be). Below are some key things to consider:

- Substitute products and services that can compete on price and/or quality
- Switch costs to shift to these products

3.2 The 3 Cs

Quite a lot of overlap with Porter's Five Forces but is shorter and more condensed and still applicable to a wide range of Case Study questions. This one is still good to have in your knowledge base and may cover some points that might be missed in Porter's analysis.

Items of analysis are listed below:

- Company
- Competitors
- Customers and Clients

3.2.1 Company

This is focused on the operations of the company itself and how the company generates revenues. This could include internal operations and best methods in being an efficient company. Below are some key things to consider:

- Product or Service offering:
 - What are the pros and cons of this product or service?
 - What is the value chain
- Profitability analysis
- Other Company factors:
 - Capacity i.e. ability to expand
 - Core competencies i.e. what is the company focus and how they execute it
 - Regulatory environment
 - Distribution network
 - Management and core employees

3.2.2 Competitors

This is focused on how competitors impact your client and how the competitive dynamics will change over time. Thus, we can recognise this as a key factor of knowing how to stand out in the market. Below are some key things to consider:

- Competitor mix and make-up
 - Market Share
 - Fragmentation
 - Financial situation e.g. do competitors have deep pockets?
 - Management
 - Other competencies e.g. marketing and distribution channels
- Competitor products or services
 - Value proposition versus client i.e. What is the firm's Unique Selling Proposition (USP)
 - Value chain i.e. what activities are required to create value

3.2.3 Customers and Clients

This one is often overlooked because one can be so focused on your competition and how you build a company to fight it yet this is probably the most fundamental aspect. It answers the question of why you're building it which is critical to customer acquisition. Analysing customers and clients is about understanding and knowing them which leads to **winning** in business. Below are some key things to consider:

- Customer mix
 - Demographics i.e. age, gender, ethnicity
 - Values of core customers and clients
 - Wants and needs of customers and clients
- Position with customer and client segments
 - Customer and client segment **sizes**
 - Customer and client segment shares
 - Customer and client segment growth rate
- Key drives of customer and client decisions
 - Price relative to value and market
 - Product characteristics
 - Branding
 - Personnel (especially for B2B businesses)

3.3 The 4 Ps

This framework is often used specifically whenever there is a marketing component involved in a case e.g. how to increase sales resulting from any profitability optimization case. When combined with the 3 Cs, this framework can cover a lot of topics you will come across. You will recognise overlap between the various frameworks which comes naturally as a result of revisiting the product discussed and so on.

Items of analysis are listed below:

- Product
- Price
- Promotion
- Placement

3.3.1 Product

This is looking into the product and/or service and its value proposition. This is what you are selling and it is important to see how a firm stands out in a sea of competitors. Below are some key things to consider:

- Company product and/or service qualities, features and attributes: differentiated (unique) or commoditized (uniform)?
- Competitor product and/or service qualities, features and attributes
- Substitute product options:
 - How close are the substitutes
 - USPs?
 - Switching costs
- Customer value proposition
 - Why are customers or clients purchasing the product/service?
 - Brand, availability, service, value, reliability, aesthetic etc.

3.3.2 Price

It is critical to understand the company's optimal pricing strategy. For start-ups and firms looking to grow, pricing is likely to change to optimise profitability and success in the market. Below are some key things to consider:

- Price elasticity (economics)
 - Is the product sufficiently better to justify a higher price?
 - Customer loyalty and lock-ins
 - Supply and demand i.e. looking at the state of the market
- Price of substitute products and services
- Price of competitor products and services i.e. 'perfect substitutes
- Market positioning
 - Brand position and perception
 - Status
- Profitability i.e. thinking about costs

3.3.3 Promotion

This is related to marketing strategy and is about reaching and attracting the customer or client. You will find a large overlap with **Product** as it is focused on the needs of the customers and why the product is made in the first place. This helps determine promotional aspects. Below are some key things to consider:

- Which markets and customers should the company target?
- Is it successful in reaching this market?
- What are the most effective marketing campaign strategies? e.g. A/B testing
- Return on marketing spend
- Retention rates e.g. if it's a product, they are restocking, if it's a service, they are resubscribing
- Can we up-sell or cross-sell? i.e. better products to sell of the same variety or new/different products to sell of the same value

3.3.4 Placement

This is about getting the products to the customers in a tangible manner and how the company goes about doing this. Below are some key things to consider:

- Which distribution channels to use? e.g. selective/exclusive or wide distribution networks?
- Transport and logistics
 - Seamless delivery? Service online?
 - Internal transport or outsourced?
- Specific locations within the channels
- Online marketing, landing pages, Google Adwords
- Product placement in stores? (if physical)

3.4 SWOT Analysis

This type of analysis is more of a mini-framework, specifically for quickly evaluating a single company in an industry. It's far less complete and can miss some important details but gives you a quick and concise way to analyse a company. It's effective at a high-level and is intuitively understood.

Items of analysis are listed below:

- Strengths: Company strengths within an industry
- Weaknesses: Company weaknesses within an industry
- Opportunities: What opportunities are available within the industry or, potentially, the opportunity to branch into a new industry
- Threats: What threats can hurt company growth or performance such as new entrants, disruptive technology or regulation

SWOT analysis is as simple as above and does not dive into too much detail. You can tackle each individual aspect of the SWOT framework with further analysis from frameworks above or those found in the appendix.

4 Growth Strategies

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Venture Capital 5 EXIT STRATEGIES

5 Exit Strategies

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A VC Firms

Listed here are some of the more famous VC firms and their investing specialities.

A.1 Accel

This is an American Venture Capital Firm that works with startups in seed, early and growth-stage investments. This means the seeding rounds and along Series A to D territory. Although their head offices are based in Palo Alto, California, they have funds across Europe, headquartered in London along with offices in India, Australia, Brazil, China and many more.

Accel concentrates on the following technology sectors:

- Consumer
- Infrastructure
- Media
- Mobile
- Software as a Service (SaaS)
- Security
- Customer Care services

Some of their recent investments/exits include:

- Cloudera with an **IPO** Valuation of \$2.30bn in 2017
- Despegar with an IPO Valuation of \$1.97bn in 2017
- \bullet Etsy with an **IPO** Valuation of \$1.78bn in 2015
- Jet acquired by Walmart for \$3.3bn in 2016
- Krux acquired by Salesforce for \$700m in 2016
- Lynda.com acquired by LinkedIn for \$1.5bn in 2015

Read more about Accel at: https://www.accel.com/

A.2 Andreessen Horowitz

Another American VC with its headquarters in Menlo Park. AH Capital Management invests in both early-stage start-ups, in the \$50k range, up to established growth companies raising tens of millions of dollars.

AH focuses on:

- Mobile
- Gaming
- Social
- E-commerce
- Education
- Enterprise IT e.g. SaaS, Cloud, Cyber Security

Some of their notable investments/exits include:

- \bullet Instagram
- Business Insider
- Leap Motion
- Dollar Shave Club
- Github acquired by Microsoft for \$7.5bn in 2018

Read more about Andreessen Horowitz at: https://a16z.com/

A.3 Benchmark

Another American VC with its headquarters in San Francisco, Benchmark primarily focuses on seed money given to start ups. Although their focus is seed, the funding could extend to millions for larger stakes in the company. They were founded in 1995.

Benchmark focuses on:

- Mobile
- Enterprise IT
- Social
- E-commerce

Some of their notable investments/exits include:

- eBay
- Uber
- Dropbox
- Twitter
- Snapchat
- Instagram
- WeWork

The list goes on for Benchmark who have had over 250 investments in start-ups since its inception in the 90s. Their track record is one of the most successful in the business. Read more about them at: https://www.benchmark.com/

A.4 Index Ventures

Index is an international VC with dual headquarters in San Francisco and London. Since its founding in 1996, originally a technology venture arm of a bond-trading firm, Index has raised approximately \$5.6bn for its investments. Their focus is at the seed to series level with a emphasis on growth capital.

Index Ventures focuses on:

- E-commerce
- Fintech
- Mobility
- Gaming
- Infrastructure and AI
- Security

Some of their notable investments/exits include:

- Dropbox
- Duo Security acquired by Cisco for \$2.35bn
- Etsy
- Facebook
- King (Candy Crush) IPO and subsequent acquisition by Activision Blizzard for \$5.9bn
- Sonos
- Supercell

The list also goes on for Index Ventures with a lot of notable companies in their books. Their track record is also very successful. Read more about Index Ventures at: https://www.indexventures.com/

A.5 Sequoia Capital

Sequoia Capital is an American VC with headquarters in Menlo Park with a main focus on technology. Sequoia, although its base is in America, has several funds specific to India, Israel and China. Their focus is on seed to growth capital.

Sequoia Capital focuses on:

- Energy
- Fintech
- Enterprise Software
- Healthcare
- Mobile

Some of their notable investments/exits include:

- Apple
- Google
- Oracle
- PayPal
- Stripe
- YouTube
- Instagram
- Yahoo
- Whatsapp

Sequoia has a rich history and has invested over 250 companies. They have exited in 68 IPOs and 203 acquisitions as of 2017. Find out more about Sequoia at: https://www.sequoiacap.com/ (cool website!)

A.6 Bessemer Venture Partners

Bessemer Venture Partners is a global VC firm with offices in San Francisco, New York City, Boston, Israel and India. They are an established firm, originally a Family Office, only expanding in 1974, after their 1911 founding, to VC. They are focused on seed to growth stages.

Bessemer Venture Partners focuses on:

- Consumer
- Enterprise
- Healthcare

Notable investments/exits include:

- Shopify
- Yelp
- LinkedIn
- Skype
- LifeLock
- Twilio
- Wix.com

They have invested in over 120 IPOs as of 2019. Find out more about them at: https://www.bvp.com/

A.7 Founders Fund

Founders Fund is an American VC based in San Francisco founded in 2005. They invest across all stages and sectors. Peter Thiel, known for PayPal, is one of the firms founders and partners.

Founders Fund focuses on:

- Aerospace
- AI

- Advanced Computing
- Energy
- Health
- Consumer Internet

Notable investments/exits include:

- AirBnB
- Lyft
- Spotify
- Stripe
- Oscar Health
- SpaceX
- Palantir Technologies

The unique aspect about the Founders Fund is that it is a generalist firm that invests across all divisions and geographies. Read more about them at: https://foundersfund.com/

A.8 GGV Capital

GGV Capital is a global VC that invests in local founders. It's multi-stage but sector focused with an emphasis on seed to growth investments. They have offices in China and America.

GGV Capital focuses on:

- Consumer and New Retail
- Social
- Enterprise IT

Notable investments/exits include:

- Alibaba
- AthenaHealth
- Pandora
- Slack
- Square
- Zendesk

This VC is more China focused than most. Find out more at: https://www.ggvc.com/

A.9 IVP

Also known as Institutional Venture Partners, IVP is an American VC that invests in later stage ventures. It's one of the older VCs founded in 1980.

GGV Capital focuses on:

- Consumer and New Retail
- Social
- Enterprise IT
- Education
- Media

Notable investments/exits include:

- Twitter
- SoundCloud
- Indiegogo
- Slack
- Snapchat
- Netflix

 $\overline{\text{IVP}}$ is more focused on the offering stages up to the exit through IPOs or acquisitions. Find out more at: $\overline{\text{https://www.ivp.com/}}$

B Consulting Frameworks

Listed here are further analytical frameworks and concepts that can be used to identify the potential of an investment.

B.1 BCG Growth-Share Matrix

This is used mainly to analyse and evaluate product or business lines. It uses a scatter plot with axes of **market growth** and relative **market share** to analyse business performance. This is shown below:

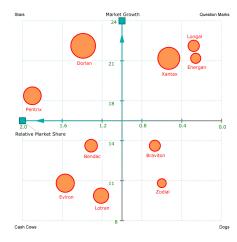


Figure 1: BCG GSM

Within this framework, there are various categories given to each quadrant as seen above. These are:

- Cash Cows
- Dogs (Pets)
- Question Marks
- Stars

B.1.1 Cash Cows

This is where the company has a high market share in a slow-growing industry. These units are usually seen to generate cash in excess of the amount of cash required to maintain the business. This is considered valuable due to the cash generating quality that the firm provides despite them being positioned in a mature market. Investment into these firms would have a high opportunity cost due to them being in an industry with low growth.

B.1.2 Dogs (Pets)

These are units with low market share in a mature and slow-growing industry. These are usually break-even businesses which are generating barely enough cash to maintain the business's market share. Such a unit is considered worthless as it is not generating cash for the company. Dogs should be sold off due to how they depress a company's return on assets ratio $(ROA = \frac{Net\ Income}{Average\ Total\ Assets})$.

B.1.3 Question Marks

These are businesses operating with a low market share in a high-growth industry. This is the starting point for most businesses as these units have the potential to gain market share and grow into stars and then cash cows when market growth slows. If they do not develop enough and obtain enough market share, they will degrade into dogs when the market declines.

B.1.4 Stars

These are units with a high market share in a high-growth industry. They have a niche-leading or market-leading trajectory which means a monopolistic or **Unique Selling Proposition** with burgeoning/fortuitous proposition drives. This is related to previous analysis in the consulting frameworks section. Stars require high amounts of funding to fight competitors and maintain their growth rate. When the industry slows, stars transition into becoming cash cows.

B.2 Product/Market Grid

This is used to determine business growth opportunities and it has two dimensions, Product and Market, which determine four growth strategies:

- Market Penetration
- Market Development
- Product Development
- Diversification

A figure of this is shown below:



Figure 2: Ansoff Matrix

B.2.1 Market Penetration

Company strategies based on market penetration normally focus on changing incidental clients to regular clients i.e. one offs to subscribers and regular clients to heavy clients i.e. subscribers to premium subscribers. Typical systems in which they can do this are volume discounts, bonus cards, loyalty cards and customer relationship management

B.2.2 Market Development

Strategies involving development try to lure clients away from competitors or introduce existing products in foreign markets or introduce new brand names into a market. This is about developing the business within the market to capture further market share.

B.2.3 Product Development

Company strategies based on product development often try to sell other products to clients. This is developing the product proposition of the business, up-selling and cross-selling with existing clientele. This can be accessories, add-ons or completely new products. Often existing communication channels are leveraged.

B.2.4 Diversification

Company strategies based on diversification are the most risky type of strategy. This is the business taking a new direction into a new market and landscape. We can also recognise that diversification can take various forms:

- Horizontal: new product with a current market
- Vertical: integration of suppliers or customer businesses
- \bullet Concentric: new product closely related to current product in a new market
- Conglomerate: new product in new market

B.3 Break-Even Analysis

This is when the number of units sold generates revenues equal to total expenses (Fixed Expenses plus Variable Expenses). This type of analysis is often applied when deciding whether to develop a new product or make a capital equipment investment. It also aids in deciding how to price products and services and the number of products to produce.

B.4 Net Profit margin

This is referring to the total Net Income of a company or business as a percentage of its revenue i.e. $NPR = \frac{NI}{TR}$. Other variations could include **Gross Profit Margin** with the gross profit being the numerator and **Operating Profit Margin** (**EBIT Margin**) or **EBITDA Margin** which simply replaces the numerator for purposes of analysis.

B.5 Return on Investment

This is the ratio that determines the return or Profit from capital invested. This is to assess the feasibility of a potential investment or acquisition and is used heavily in finance related to MnA, PE and VC.

Standard ROI is calculated as follows: $ROI = \frac{R-C}{Capital}$. Return on Assets (ROA) is a variation of this concept but revolves around all capital invested i.e. Liabilities and Equity rather than equity alone.

B.6 Compound Annual growth Rate (CAGR)

This is the percentage rate at which any figure e.g. units sold, population or investment, must grow in each year to reach a given end value over a certain amount of time. This is similar to the Internal Rate of Return (IRR) which is the annual rate of return on an investment if its value grows by a specific multiple over a specific amount of time.

The formula for CAGR is: $\left[\left(\frac{Ending\ Value}{Beginning\ Value}\right)^{\frac{1}{Years}}\right] - 1$

B.7 Lifetime Customer Value (LCV)

This projects the total profitability attributed to a firm's future relationship to a typical customer. This is to determine the reasonable cost to win or acquire a customer. In can also help determine the value of a business: $LCV \times Customers + growth \ opportunities$.

Steps to calculating LCV are as follows:

- 1. Estimate the remaining customers years i.e. how long a customer stays with the company
- 2. Estimate future revenue per year per customers i.e. product volume per customer times prices
- 3. Estimate total expenses for producing those products
- 4. Calculate Net Present Value of the future profit per customer

B.8 Product Life Cycle

This is important for market sizing problems. This is to help project company's to project their own anticipated revenue figures. It is good to know the **Product Life Cycle Curve:**

- Emerging: a new product or technology that is in initial adoption phases and therefore has very rapid growth rates
- Growth: product adoption is becoming widespread but still growing at an above-average rate
- Maturity: product adoption is widespread or at least stabilised; growth typically comes only from price increases and growth in GDP
- Declining: technological obsolescence, shifting consumption patterns or increased market competition has resulted in total growth rates that are below-average or negative