

Setup

Microfinance in India

client (rural women, \$3 a day)

(AGR: 150% pa)

(profit, private)

(criticism, high interest rates,
harsh collection tactics)

Media (local & state)

blamed high suicides

on MF in debt
& harsh collection

what should the client do?

More information

↳ Market: \$5B of \$55B net.

Competitors: Commercial capital

(NGO → For Profit)

What is the collection rate? 25% - 30%

villages

What are the collection periods? → Loan officers save ~~notes~~ incentive
who / which size in women across 5 states. with collection

deposit rate.

[Objective]: How to address / resolve criticism?

Create

In response.

Criticisms

Direct

↳ Interest rates

- why so high?

- Incentives

(Credit cards)

- Collection Period

- Average collection Period

- Behaviour of Debt collectors

- Incentives

- Tracing / Reminder systems.

- Revenues

↳ Collections (Price x Quantity)

- Default rates.

Marketings:

Market Environment

- Industry wide

- Criticism Motivations?

(Altruistic, more nuanced)

External

- Competitors

- (Harsh) policies

- Interest rates

- Brand strength?

Internal

- Training program

- Financial literacy?

- Interest rate /

collection rate.

(Look at cost structures)

- Compete with government, highly subsidised, charge lower interest rates.

Need to assess costs structure.
Competitors (both government to find lower, yet profitable interest rates / collection rates).

Chart cost structure

| | | |
|------------------|------------|--------------------------|
| Personnel | 6.4 | |
| Admin | 3.4 | → same interest rate |
| Cost of funds | 10.7 | day as costs |
| Loans lost | 1.5 | profit low in structure. |
| Profit | <u>1.6</u> | |
| Cost to borrower | 23.6 | |

D.S.R. Std., 23.6 Borrowing.

Actual cost of borrowing = Interest rates charged among competitors. in MCF space.

→ Client lowest cost (total)

No transaction / transportation (minimal)
largest interest! (no bank, local

collection officer)

However,
Govt interest rates
heavily subsidized
so does not
capture true
cost of interest!

Objective:

1). Calculate default rate

2). Calculate ROI

3) Ability

Strategy

3) Ability to repay debt!

Default Rate (less than 2%).

Return on investment (ROI).

Statistics to support.

Formulas

$$ROI = \frac{\text{Profit}}{\text{Investment}} = \frac{\text{Revenue} - \text{Cost} - \text{Investment}}{\text{Investment}}$$

Information

Cost of buffalo: 10,000 R

Useful life of a buffalo: 1 year (300 days)

Operating cost (32 R/day)

Milk per day (8L/day)

Market price/Litre of milk (8R/L)

Assumption: No true value of money; Salvage value, reproduction value.

Strategy

- 1). Revenue ($\text{Milk/L day} \times \text{Price/Litre} \times \# \text{ of days}$)
- 2). Costs ($\text{Cost/day} \times \# \text{ of days}$)
- 3). ROI $(\text{Revenue} - \text{Cost} - \text{Investment}) / \text{Investment}$

Cost of buffalo using microfinance?

Yes — add cost (per annum to investment)

No — ignore.

~~WORKING~~ → NO cost of microfinance.

$$1). \frac{8 \text{ L}}{\text{day}} \times \frac{8 \text{ R}}{\text{L}} \times 300 \text{ days}$$

$$= 8 \times 8 \times 300$$

$$= 64 \times 300$$

| | |
|-----|-------------|
| 180 | Total |
| 12 | \$ 19,200/- |
| 192 | |

- \$3/day
- In women
- SB of SSBI addressed

2) Cost

$$\frac{R}{\text{day}} \times 300 \text{ days} = 600 \text{ days.R}$$

Markup \rightarrow ~~600 day~~

3). Return on Investment

$$= (19,200 - 600 - 10000) / 10000$$

$$\begin{array}{r} 19200 \\ - 600 \\ \hline 18600 \end{array} \quad \begin{array}{r} 10000 \\ - 10000 \\ \hline 0 \end{array}$$

(Numerator)

~~86%~~

~~08.86 % Percentage~~

$$\begin{array}{r} 100 \\ | \quad 860 \\ - 800 \\ \hline 60 \\ - 60 \\ \hline 0 \end{array}$$

~~86% ✓ (work on width)~~

~~→ Subtraction.~~

Client cost to borrower

23.6% (Add to borrowed).

2).

~~Cost of loan (P.A)~~

$$\text{Cost} = 2360 + 600 =$$

$$\text{Note} = 2960$$

Note: Cost of Loan

$$\begin{array}{r} 18600 \\ - 2960 \\ \hline 15640 \\ - 600 \\ \hline 15040 \end{array}$$

$$\text{ROI} = \frac{5640}{10000}$$

$$= 56.40\% \text{ (Return)} \\ 62.40\%$$

Recommendation:

Based on borrowing example.

The borrower still generates 86% or 2.62.40% Return on investment depending on the cost of borrowing.

The interest rates are ~~set~~ below competitive (although true cost of borrowing due to subsidy not reflected).

→ Other factors may be cause of criticism.

↳ Borrowers (Hard borrowing practices)

(Cultural differences, men vs women)

→ Better training, several debt collectors

Provide better education on financing schemes.

→ Also, profit margins are very low (1.6%).

Any adjustment will erode profits.

P2 Marketing strategy To address criticism

↳ marketing strategy. Show available alternatives.

Risks - Competition drops interest rates, priced out of market. Need to form a relationship with borrowers to increase switching costs.

3 Step

Recommendations

Risks & mitigations

Next steps.

Rate high for micro entrepreneurs.

- Avoidance of costs
 - ↳ labour through family
 - tax avoidance / legal costs.
- Capital costs are very small.

Case 2: China Outsourcing Opportunity.

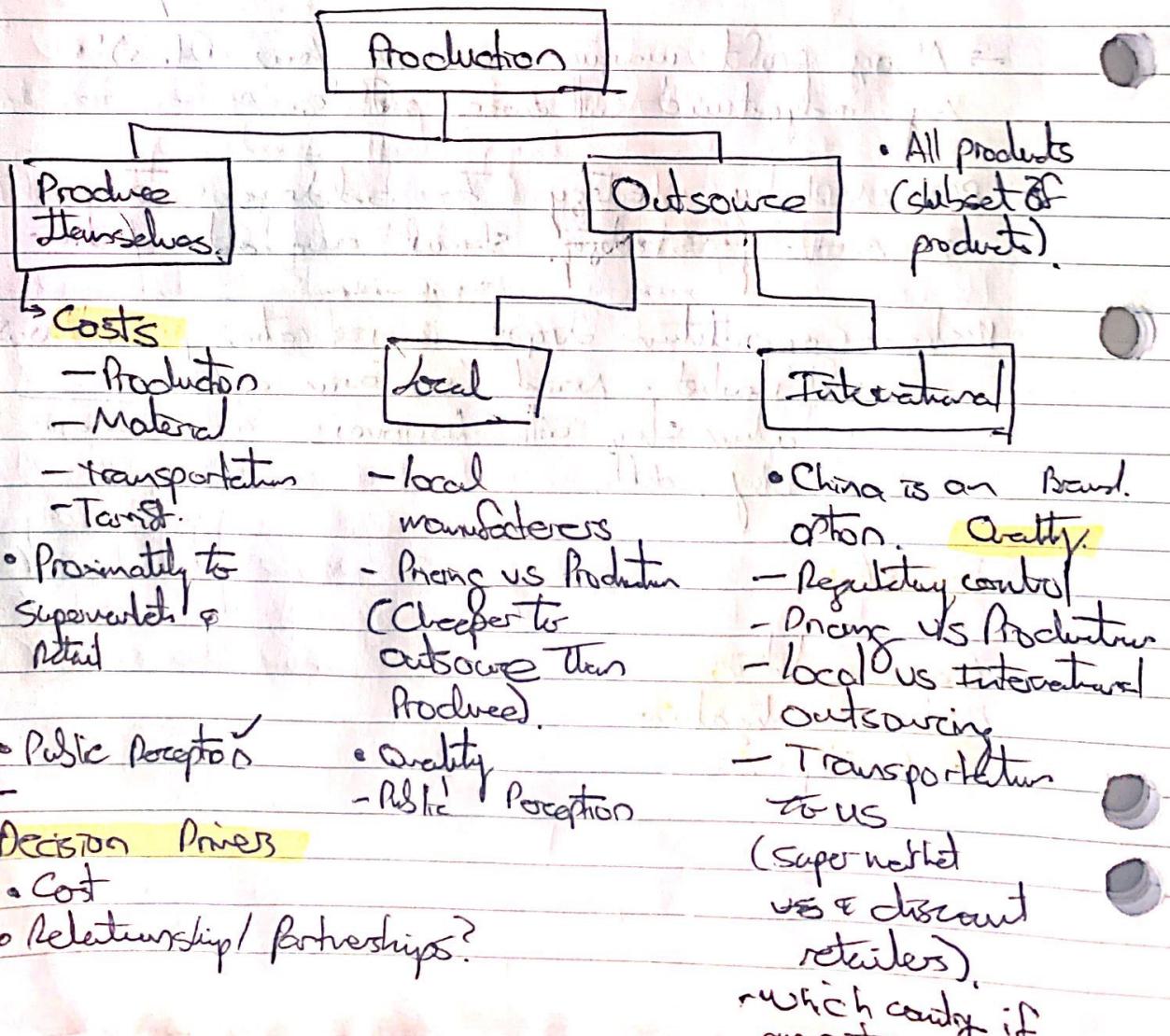
- Natural plastic manufacturer (us)
- Supermarket & PC retailers.

Outsource To China

↳ No-one has done this yet?

Should they.

Product? - Greener bags, plastic plates & utensils.



Need to look at costs

Matrix would be best.

| | Costs | Quality Recover a Seasonality | Branch |
|-----------------|---|----------------------------------|--------------------------------------|
| Inhouse | Production -Transportation -Manufacturing | | |
| Locally | -Transport (Short distance) | | Company based |
| Internationally | Tariffs | | Lay offs in US. Labour standards. |
| All three | Production -transport | Quality seasonality. | Labor condition |

Need to look at differences in cost.

- Hypothesis: Financial driver first, then assess other factors for a go or no go position.

Objective: Calculate cost of outsourcing to China.

| <u>Information</u> | Cost (\$/lb) | Cost in China relative | Cost (\$/lb) in China |
|--------------------|-----------------|-----------------------------|-----------------------|
| Labour | 0.30 | 8x wage 80% productivity | |
| Material | 0.30 | | |
| Plastic resin | 0.30 | 80% | |
| Other | 0.20 | 75% | |
| Variab. OH | 0.05 | 140% | |
| Fixed OH | 0.10 | 60% | |
| | 1.00 | | |

Transport

China → US Distribution N/A
US distributor to customer 0.05
\$ GK to ship lots.
Save

Strategy

- 1). Recalcul Labour based on productivity
- 2). Calculate relative costs
- 3). Calculate transport (\$/lb)
- 4). Sum all costs together

WORKING

- 1). China wage expensive
produce less per person

1). China less productive so produce less. for more \$.

$$\frac{0.30}{0.80} = \frac{0.375}{80} \\ \underline{-24} \\ 60 \\ \underline{-56} \\ 40 \\ \underline{-40} \\ 0$$

wage

If ~~labor~~ cost the same, labor in China costs \$0.375/lb produced compared to \$0.30/lb. in USA.

2). Apply all cost relative costs.

$$\text{Labor } 0.375 \times 80\% = 0.03$$

Material

$$\text{Plastic } 0.30 \times 80\% = 0.24$$

$$\text{Other } 0.00 \times 75\% = 0.00$$

$$\text{Variable OH } 0.05 \times 140\% = 0.07$$

$$\text{Fixed OH } 0.10 \times 60\% = 0.06$$

0.05

Note: labour.

WORKERS

$$0.375 \times 0.08 \quad \underline{\text{Total}} \quad 0.03$$

$$375 \times 8$$

$$2400$$

$$560$$

$$40$$

$$\underline{3000}$$

3). Calculate transport costs.

(\$/1B)

$$40 \sqrt{60} \\ \underline{-40} \\ 200 \\ -200 \\ 0_f$$

(4). Sum the costs.

(Relative costs + transport)

$$\begin{array}{r} 0.05 \\ 0.55 \\ \hline \underline{+ 0.15} \\ = 0.75 \end{array}$$

forget the other

Cost (\$)

US distribution

to retailer (direct
& supermarket)

Cost of outsourcing to China is \$0.70/LB,
as (0.30 \$/LB) cost savings achieved.

↳ Consider other factors

↳ Quality

↳ Seasonality (& availability of workforce)

↳ Regulatory control (e.g. Trade laws,

(Brazil, UK outsourcing to China)

Are there cheaper options?

Other options.

→ lease capacity & excess capacity from
outsourcing (new recurring revenue)

→ reassess product lines
(Frequent or fixed OH)

Research other risk to assess the benefits.

Other benefits

→ Easy access to other markets,
especially Asian markets.

Case 3: Cosmetics

Cosmetics Company thinking of buying another

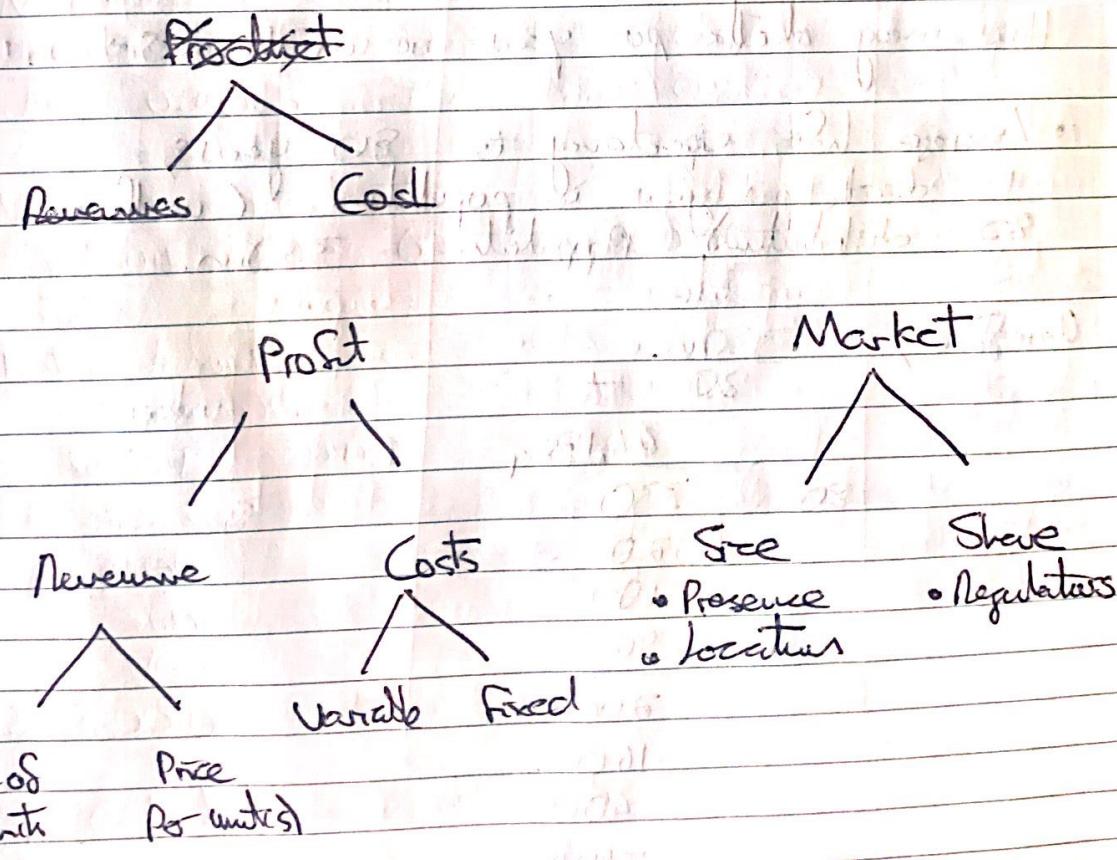
- What factors should you assess in how much they should pay.
- Avoid synergies & financing at the moment.
(expt, cash, stocks)

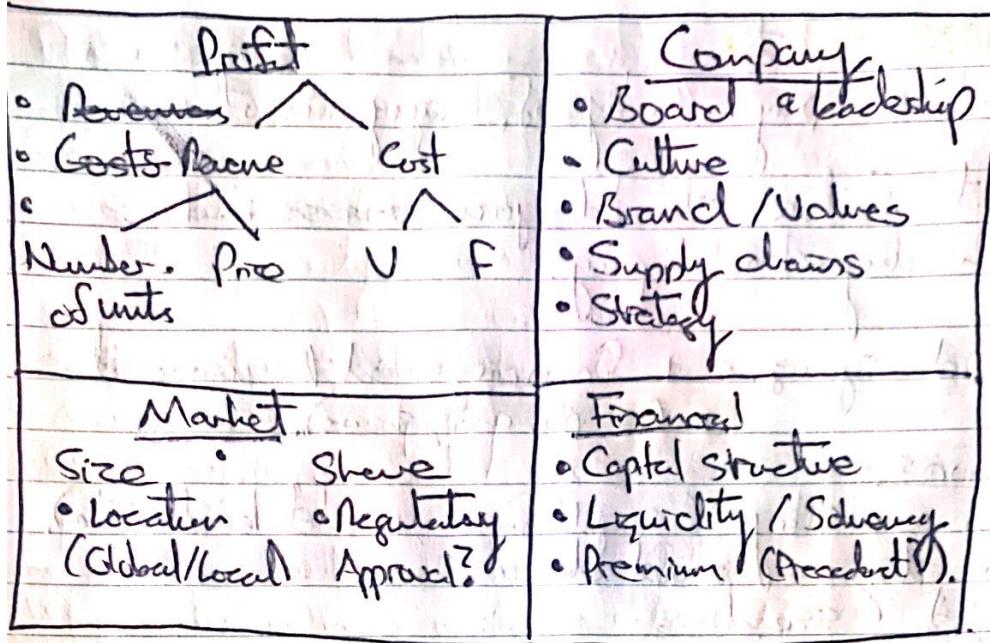
Actions

- who are they (small firm, market leader etc.)
- are they profitable
market size.

$$MS = 10\%$$

Acquirer = Market Leader.





- Most important
- Revenues / profitability
(ROI on acquisition?).

How many deaths per year are in the US?

- Average life expectancy is 80 years,
 $\frac{1}{80}$ deaths per year in population (uniform distribution). Population = 330m.

Therefore, $\frac{330m}{80} = 4.125$

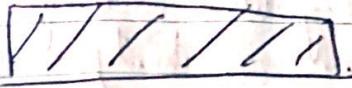
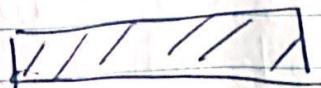
$$\begin{array}{r}
 4.125 \\
 80) 330 \\
 - 320 \\
 \hline
 100 \\
 - 80 \\
 \hline
 20 \\
 - 160 \\
 \hline
 400 \\
 - 400 \\
 \hline
 0
 \end{array}$$

4.125m deaths per year.

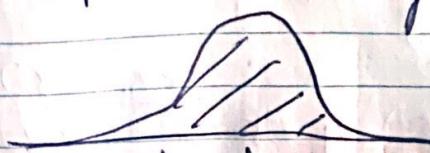
My numbers assume a uniform distribution
of deaths to the population.

1/80.

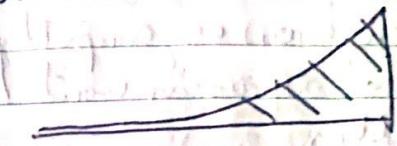
Population dist (assumed).



• Population actually



Method of death



→ Combination of these factors leads to different number of deaths due to different distributions.

Specifically: Valuing a company:

- 1). EBIT - CAPEX - Δ NWC.
- 2). $B \cdot EBIT(1-t) + PA = \text{free cash flow}$.
- 3). Forecast FCF → \$ and TV
- 4). Discount using TVM $N = \frac{FCF_N(1+g)}{(r-g)}$

$$N = \sum_{n=1}^N \frac{FCF_n}{(1+wACC)^n} + \frac{FCF_N(1+g)}{(wACC-g)} \rightarrow \text{Poperty growth model.}$$

Enterprise value.

5). Subtract Net Debt for Equity value.

(Adjust for Investment in associates & minority interest if necessary).

6). Determine Price/share by $\frac{\text{Equity value}}{\# \text{ of outstanding shares}}$.

Add premium & determine fairway.

Additional methods include transaction multiples & precedent transactions.

Case 4: Bottled Water Case.

- Beer manufacturer
- Stagnating Sales
- Competitive industry
- Growth opportunity
(BW)

Bottle water stable & steadily ↑

- Micro breweries competing
- Global expansion won't solve problem.

- factories / production similar for BW than beer.

Why enter a new market like BW?
to achieve sales & bottle goals. IC goals.

| Product | Product | Customer |
|------------------------|--|-------------------------|
| Factors | - Price / Revenue | - Needs & Wants |
| Competition | - Costs | - Target (Demographic) |
| Company | - Marketing | - Consumption Behaviors |
| Pesticide registration | - Go-to-Market Strategy | - Complimentary |
| Market | - Branding | |
| - demand | Competition | Company |
| - Growth | - Market size / share of BW Market | - Capability |
| - Reservation | - Pricing | - Brand / Values |
| - upload law | - likelihood response to a new entrant | - Financial |
| - Antipodal act. | | - Production |

Need information?

Build a Case to Enter



- | | | |
|--|--|---|
| Break-even / Profit - will it make money? | Market - Can we enter the market? | Product - Is there a better alternative to BW? |
| - will it remain | - will we continue to gain MS / Stay in market | |

Step 1: determine if money to be made (Market size, share & Break-even).

Market / Customer Information

| | |
|---------------------------------------|---|
| CAGR 10% \$/12oz = \$1.50 | new/clear active IS-GS # grow S-G. fd. |
| Current wallet = \$1.5B (1B bottles) | |
| client local distributor connected | = 1 \$25m cash left, |

Partners need to upload for investment
 Production cost = \$0.50 / bottle.
 Distribution cost = \$0.20 / bottle.

Factory capacity
 available soon
 soft drink

Manufacturing Capabilities / Competition

- Plants full / capacity
- New Sisler cost \$50m
- ~~Even~~ Factory manufacturing capacity not cover demand

→ Each one produce 700m bottles.

Strategy

- 1) Profitable?
- 2) Market size available
- 3) Can we fund it?

1). Determine Break-even point.

$$BEP(\text{unit}) = \frac{\text{Fixed cost}}{\text{Contribution Margin / unit}}$$

$$= \frac{20m}{(1.50 - 0.5 - 0.2)}$$

$$= \frac{20m}{0.8}$$

Working QS

$$\begin{array}{r} 8 \\ \times 200 \\ \hline -160 \\ \hline 40 \\ -40 \\ \hline 0 \end{array}$$

Answer = 25m units.

→ Only sell

2). Market available to sell wine?

Yes.

$$1.0513 \times 1.10 = 150m \text{ new bottles available to be sold.}$$

Can capture this new market, especially since existing competitors can't capture it.

3). Can we get capacity?

build New

- \$5m
- take time
- more control

lease

- < 25m
- 400m bottles
- do now
- less control
- less risk

Yes, lease.

Fund investment?

Yes, use 20m from 25m cash left on firm acquisition.

Brahmin Market Share

$$\frac{\text{BMS}}{113} = \frac{25}{1000}$$

$$\begin{array}{r} 0.025 \\ 1000 \end{array} \overline{) 25000} \\ - 20000 \\ \hline 5000 \\ - 5000 \\ \hline 0$$

$$0.025 = 2.5\%$$

Acquire 2.5%.

Since it grows at 10% CAGR (Assume P.A.)
→ Suitable to acquire.

Can it sell it?

→ Yes, use existing distribution channels & sell to
the ~~existing~~ customer base (S-G. CAGR).

→ Give recommendation on why this analysis
fails.

→ Reserve success for the company

→ What is the company going to achieve.

Market

Case 5: De Beers Retail venture

New Business.

- Entering Retail business (for diamonds).
- Do they do it?

3C 1P 1M 1R

| Customer | Company | Competition |
|---|--|--|
| <ul style="list-style-type: none"> • Needs & wants (Visit the store) • Demographic • Target • Customer growth / acquisition | <ul style="list-style-type: none"> • Value chain (Retail Support) • Brand / value • Operate (Ability to sell these products) in retailer • Tighter f'dx? | <ul style="list-style-type: none"> • Existing Retailers. • Growth - Relationship with existing retailers at stake? - Potential to squeeze out of market? |
| Market | Risks | Product |
| <ul style="list-style-type: none"> • Market size, share • growth • | <ul style="list-style-type: none"> • Loss on investment • Dislocation from Board. | <ul style="list-style-type: none"> • Useful? (Getting channels good enough) • Profitable (Result in more diamonds sold) |

Target chain

• Revenue & Cost

1). Is it profitable?

↳ Income statement to outweigh costs.

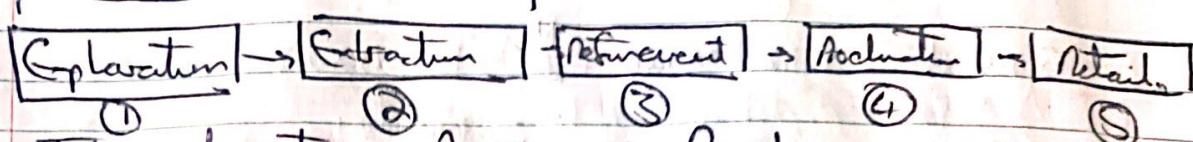
2). Will it create value chain synergies?
(Cut costs, better control?)

3). Can ~~competitors~~ MS be captured? MS = Market share.

4). If yes to 1, 2 & 3, what firm should retail the.

Assume value chain similar to oil & gas?

• Explorator



Take advantage of Brand Equity
So complete 1, 2 & 3's.

Information

- IGNORE Competition
- Industry healthy
- Wealthy Customers
- Metropolitan areas

What are the fixed costs of Retail operation?

- Real estate (leasing)
- Salaries of retail (assumes no workers assume base)
- Fixtures (Replaced/reacquisition of)
- Asset (Depreciation, Amortisation).
- Electricity / water / gas (fixed component)

Issues related to location

↳ Metropolitan areas were costly

(Usually on a square-metre basis).

Cost per year

Information

£ 300 / sqm (assuming per annum)
£ 5000 sqm

$$\begin{aligned} \text{Cost/yr} &= 300 \times 5000 \times 12 \\ &= 1800000 \\ &= 1.8 \text{ m} \times 13 \\ &= \$18 \text{ m/year.} \end{aligned}$$

Calculate the gross margin as per the next exhibit.

- Gross margin = $\sum_{n=1}^N$

| Product | Price | GM | Profit | Allocation mix | Revenue |
|---------|-------|-----|--------|----------------|---------|
| P1 | £300 | 20% | £60 | 20% | £12 |
| P2 | £500 | 30% | £150 | 40% | £60 |
| P3 | £1000 | 10% | £100 | 10% | £10 |
| P4 | £1800 | 20% | £360 | 20% | £72 |
| P5 | £5000 | 30% | £1500 | 10% | £150 |
| | | | | | £304 |

Vacancy only cost is Real Estate = £18m/yr.

How many charcos to break even?

Strategy: Above information

- 1). Calculate Average revenue / unit using allocation mix
- 2). Form a solve equation to determine # of units.
(Are there any variable costs to consider?
- NO.)

$$1). \sum_{n=1}^N AM_n R_n$$

AM_n = Allocation mix_n

R_n = Profit n

n = {P1, P2, P3, P4, P5}

(Done above, £304)

$$2). Revenue \times \text{number of unit} - \text{fixed costs} = 0$$

$$\text{Number of units (Breakeven)} = \frac{\text{fixed costs}}{\text{Revenue per unit}}$$

Revenue per unit

| | | |
|-----------------------------|----------------------|-----------------|
| 304 J 18,000,000 | \$9177.6. | 304 x 9 |
| - 1520 | | 2700 7 |
| <u>2800</u> | | 0 |
| - 2746 | | 36 |
| <u>540</u> | | |
| - 304 | | 2800 |
| <u>2360</u> | | - 2746 |
| - 2128 | | 4 |
| <u>02320</u> | | |
| - 2128 | | 2800 |
| <u>01920</u> | | - 27910 6 |
| - 1824 | | - 2746 |
| <u>00916</u> | | 0054 |

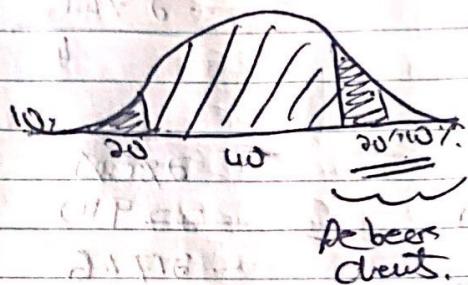
| | | |
|-----------------------------|--------------------|----------------------|
| 304 J 18,000,000 | 59210.5 | 310 |
| - 1520 | | 540 |
| 2800 | | - 304 |
| 2736 | | 236 |
| 640 | | |
| <u>608</u> | | 24 238 ¹⁰ |
| 320 | | - 2128 |
| - 304 | | <u>0192</u> |
| 1600 | | |
| - 1520 | | |
| <u>80</u> , Stop | | |

Round to \$9211.

need to sell \$9211 units.

- Is it feasible to sell small diamonds?
- Market sizing (Top down approach)

- {
- Based in London (Population 10m).
 - Assume: Regular Birth & Mentor
 - Sold to wealthy individuals (Diamonds pretty dear)
- Assume Normal distribution of wealth



30% of London population can afford.
3m

- How many per

Strategy

- 1). Number in London
- 2). Number of wealthy individuals
- 3). Frequency of Number who would make a diamond ring.
- 4). Frequency of purchases.
- 5). Average purchase number.

Working

Diamond Ring

1). 3.10m

2). 30% of 10m = 3m

3. ①. Usually associated with special occasions (Weddings, anniversaries, Notable occasions).
wealthy family → average of 4. (One for parents own one ring)

$$\frac{3}{4} = 0.75m$$

$$0.75m \times 2 = 1.5m \rightarrow \text{own a ring.}$$

4. Usually, buy one rug in a lifetime.

- Assume normal distribution of average lifetime (80).

$$\begin{array}{r} \text{1.5m} \\ \hline 80 \\ 18750 \\ 80 \) 18750000 \\ -80 \\ 700 \\ -640 \\ 600 \\ -560 \\ 400 \\ -400 \\ 0 \end{array}$$

Based on assumptions, total market p.a is
18750 drawings.

$$\begin{array}{r} 3.02 \\ 18750 \\ 18750) 60000 \\ -56250 \\ 37500 \\ -37500 \\ 0 \\ 18750 \\ 18750 \times 2 \\ 0 \\ 0 \\ 150 \\ 100 \\ 2100 \\ 24000 \\ 30000 \\ 16000 \\ 20000 \\ 56250 \\ 37500 \end{array}$$

De Beers would need to sell
3.02 x available Market size so not
feasible.

Another approach is determine how much to sell on account per hour.

60000 /year

| | 36Sx5 | 36Sx6 |
|------------------|--------|-------------|
| 169.3 | | |
| 36S J 600,000 | 169.31 | |
| -36S | | 25 |
| <u>235.8</u> | 300 | 180 |
| 235.8 | 1500 | 1800 |
| 235.8 | 1825 | 2010 |
| -2010 | | 1825 |
| 03400 | | 365 |
| -3285 | | <u>3285</u> |

1150

36Sx3 36Sx6

| | | |
|-------|-----|-----|
| -1095 | 15 | 30 |
| 55 | 180 | 360 |

1640

36S J 60,000

900 1800
1095 120

2190

-36S

~~2350~~

-12190

01600

36Sx4

20

000 -1460

240

140

1200

1460

Sum-Sum

90

Number of diamonds sold per hour on a
Summer-Spring day, 365 days a year.
9 hours

$$365 \times 9$$

$$\begin{array}{r} 45 \\ 540 \\ 2700 \\ \hline 3285 \end{array}$$

1.8

$$\begin{array}{r} 3285 \\ - 3285 \\ \hline 27150 \\ - 26280 \\ \hline 870 \end{array}$$

$$3285 \times 8$$

$$\begin{array}{r} 40 \\ 640 \\ 1600 \\ \hline 24000 \end{array}$$

Need to sell

1.8 diamonds every hour or
~~16.2 diamonds a day~~
(not feasible)

$$\begin{array}{r} 1.8 \times 9 \\ \hline 16.2 \end{array}$$

Through both methods,
the shop is too big.

(Find other locations).

Recommendations

Is it better to think strategy of opening a
Shop up in London with a 5000 sqm per year
at £300 / sq for 12 months. £18m.

60,000 diamonds per year is required to sell
to Breckin. Traditional brick & mortar may
not be best. This (not feasible)

Risks of opening would wear definitely about
sell all the diamonds need (Market
not big enough).

Investigate smaller stores (< 500) or
online for feasibility.

Consider other factors in the matrix as well!
Check out profitability of other products,
Pj + PS with GM is 30%.

Case 6: Hospital Administrative software.

- Nursing Software is still on rise Nation wide.
- Admin, back office operations, clinical record keeping.
- Sales declining, no longer market leader.

Objective: Determine why sales dropping &
Recommendations for this issue.

Build a framework

| Market / Industry | Customer | Competitors |
|--|--|---|
| <ul style="list-style-type: none">- Market Conditions (Economic downturn?)- Company Market share & size (Segmentation?) | <ul style="list-style-type: none">- Δ in taste/preference Needs & wants(2007 vs 2011, N.d. updating?) | <ul style="list-style-type: none">- What are Competitors doing? (Price) |

Given
out?

- 1). Market size/growth
- 2). Customer Need/Want
- 3). Competitor Response.

Market
(Determine number of
hospitals & growth
rate of hospital).

- Replacement Rate = 10 years.
- 3 year installation period
(9M over 3 years, ~~start~~
3M pa).
- Only one package
needed per hospital.

Assume Nation is America.

- Auckland has 3 major hospitals (North Shore, Middle more, Auckland Central)
- Auckland Population is 1.5m
- Each major hospital has approximately census 5000 people

$$\frac{1.5m}{3} = 0.5m$$

- US population of 330m.

Therefore population # of hospitals is ~~330 / 0.5m = 660~~,

$$\frac{330,000,000}{500,000} =$$

$$= 660$$

$$25 \overline{) 33000}$$

$$-30$$

$$\overline{30}$$

$$-30$$

$$\overline{0}$$

$$1320$$

$$25 \overline{) 33000}$$

$$-25$$

$$\overline{80}$$

$$-75$$

$$\overline{50}$$

$$-50$$

$$\overline{0}$$

1300

~~Hospitals~~ Hospitals (Too small), Actually 6090 Hospitals.
(Grows at 1% per year, inconsistent with logic but okay).

54187.1/

Information

609 J 33000,000

- Market growths at 5% pa. - 3045
- Competitor can install in 2 years. - 2850
- Hospitals ~~are~~ difficult to sell to (4 years with delays). - 2436
- Patches needed when delays occur, - 0809
Costly to ~~patients~~ programming & training costs. - 05310
- Customers prefer simple products, - 04380
easy to use. - 4263
- More features than needed. - 01170
- R&D don't do market research for products - 0609
- 0561

• Syringe continued.

6090 hospitals in USA.

Each serviced 10 years, so

$$\frac{6090}{10} = \frac{609}{1}$$

→ Assume 609,

→ 609 units × 9M

$$= 609 \times 9$$

81

0

\$400M

\$481Bn

→ Market size

$$= \$481M / year$$

• ~~External~~
Why is growth rate declining?

→ Internal Decline

Internal factors

Internal

- Fixation

• Too complicated a

product,

• Too many excess

features

• Product rollout

incubated with delays.

• ↑ Patch costs

related costs.

External

• Market growth is

fine

• Competitor rollout

product quicker.

2 proposed recommendations

Market size is \$5.4B with CAGR of 15%.

- 1). Address internal factors
 - a). Align product with customer needs
 - simplify, remove excess features.
 - b). Improve installation guidance to mitigate delays. & Avoid programming/tech/training costs.
 - c). Investigate cloud-based products to avoid installations (market trend).
 - d). Controls installed with R&D (don't create excess features).
- 2). Address external factors
 - a). Invest in low-to-streamline installations active with competitors.
 - b). Improve technology.

CASE 7: Jamaican Land Investment

Information

- Client buys land in Jamaica for \$3000
(Is this a good idea?).

Hypothesis: Yes (see New Zealand / Global Real Estate Markets).

Framework on next page - need to ask for more information.

Wharton 2008 Casebook

BCG: JAMAICA LAND INVESTMENT

Information

- Price: \$3000
- Quantity: 10 acres.
- Uses: Property, Agriculture, Investment
- Constraint: None

Plants are trees, shrubs, fruits & exotic flowers

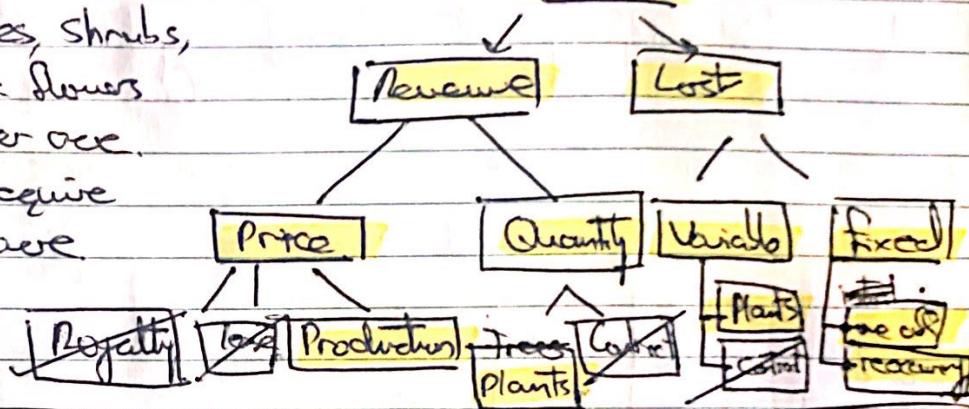
- One plant / per acre.
- Larger plants require more space / acre.

Objective: Assess Profitability of Asset Acquisition (Agricultural use)

\$4500 profit with 2 years
(exclude \$3000 purchase)

Framework

Profit



FRAMEWORK + INFORMATION.

| Plant | Price \$/Plant | Quantity Param | Conversion | Quantity | Yield % / acre | Variable plant \$/ace |
|--------|-------------------|-------------------|------------|----------|-------------------|-----------------------------|
| Tree | 50 | 5000 | 1 - 60% | 2000 | 10% | 30 |
| Shrub | 35 | 1000 | 1 - 20% | 800 | 25% | 25 |
| Fruit | 15 | 1000 | 1 - 85% | 150 | 75% | 11 |
| Flower | 25 | 2500 | 1 - 90% | 250 | 50% | 17 |

Fixed

Initial (1st only): \$500

Recurring: \$350 / year (salaried)

Strategy

- 1). Determine profitability per plant (cross out)
- 2). Determine most profitable planting plan. (yield / acre)
- 3). Determine if profit / loss is made.

WORKINGS.

1). Profitability / Plant by contribution margin / unit.

| Plant | CM/unit |
|--------|---------|
| Tree | 20 |
| Shrub | 10 |
| Fruit | 4 |
| Slower | 8 |

2). Determine contribution Margin per acre by using minimum of available market quantity & yield per acre.

| Plant | CM/unit |
|--------|---------|
| Tree | 20 |
| Shrub | 10 |
| Fruit | 4 |
| Slower | 8 |

| Plant | CM/unit | Yield/acre | CM/acre | Ranking |
|--------|---------|------------|---------|---------|
| Tree | 20 | 10 | 200 | 4 |
| Shrub | 10 | as | as | 3 |
| Fruit | 4 | 75 | 300 | 2 |
| Slower | 8 | 50 | 400 | 1 |

3). Continue by populating most profitable plant in each acre until all acres filled & constraint of available market quantity not exceed.

| | Yield/acre | MARKET AVAILABILITY | Max acres |
|--------|------------|---------------------|-----------|
| Tree | 10 | 2000 | 200 |
| Shrub | 25 | 800 | 40 |
| Fruit | 75 | 150 | 2 |
| Slower | 50 | 250 | 5 |

~~Plant strategy is 5 acres of Slowers, 2 acres of fruit, 3 acres of shrubs.~~

3). Determine contribution margin, subtract fixed costs, multiply by for two years to determine if financial target reached.

| Plant | CM/acre | Number. | Acres | CM |
|--------|---------|---------|-------|------|
| Tree | 200 | 0 | 0 | 0 |
| Shrubs | 250 | 3 | 750 | 750 |
| Fruit | 300 | 2 | 600 | 600 |
| Flower | 400 | 5 | 2000 | 8000 |
| | | | | 3350 |

Contribution margin /year is \$3350

Financial
2 years profit.

$$\underbrace{(3350 \times 2)} - \underbrace{(500 + 350 \times 2)}$$

| CM | Initial Fixed cost | Sales. |
|----|-----------------------|--------|
|----|-----------------------|--------|

$$= 6700 - 700(500 + 700)$$

$$=\$5500,$$

Financial target exceeded by \$1000, investment ~~(Assuming no risk)~~ will reach financial target.

Based on this analyse, an investment is recommended.
However,

- Check weather variability
(Statistical analysis /modeling to check variability of yield production.)
- Assess growth rate & market demand for products if change across the two years.

CASE 8:

Academic Performance of Students.

Information

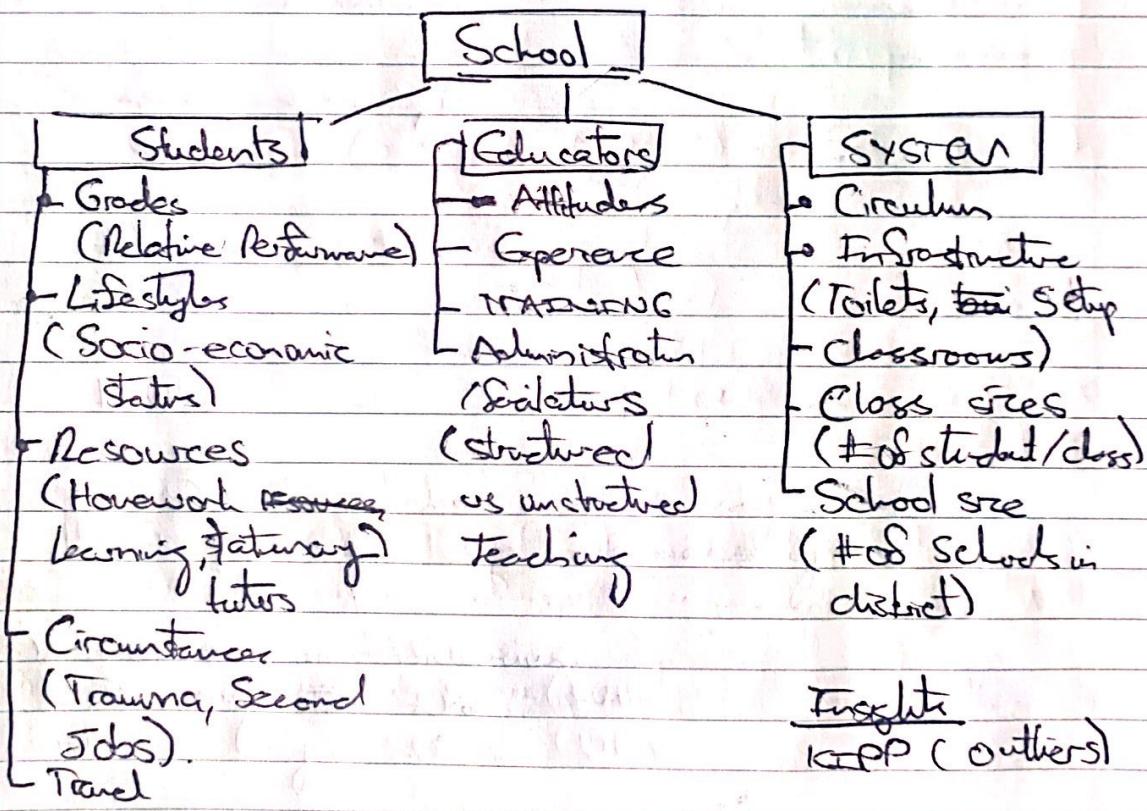
- Public School System in city
- 130,000 students
- Scores lower than rest of the state (materially)

Objective

- How do we improve the average score of student in the city.

Dissect the issue & uncover recommendations.
Prepare the following student structure

Framework



Questions

- Demographic makeup (Class breakdown)
- Which age group is not uniformly distributed
- Are there any observable trends bringing down the average at school / district / area.

Further information

- Elementary : KG → 8th
- Middle : 7th → 8th
- High : 9th → 12th

Contributions to matrix

| <u>Students</u> | <u>Educators</u> | <u>SYSTEM</u> |
|--|------------------|------------------------------------|
| Resources (2 book each, 75% arrive on time due to 20% increasing due to warehousing & online orders. | | class sizes, equal # per class. |
| - External factors | | Admin |
| NOT A PROBLEM. | | Warehouse |
| | | Special education |

Responses suggest warehousing is an issue. (75% delayed)

- Investigate warehousing.

MATHS Question

- Each student orders 2 books
- Equal # of students each grade.
- 25% don't come on time
(75% warehousing, 25% online orders)
- McKinsey's view, warehouse would ↑ efficiency by
50% & online orders by ~~over~~ 50%
- If

Objective

- How many additional books would come on time with improved efficiency?

Strategy

- 1). Number of books before changes.
- 2). Contributions & not achieved by warehousing & online.
- 3). Calculate increased number from warehousing & online.
- 4). Calculate total additional.

Giving book arrival.

1) 130,000 student

$$130,000 \times 2 = 260\text{K books}$$

75% arrive on time

$$260\text{K} \times 0.75 = 195,000\text{K books}$$

65K books don't arrive on time.

2). Number of ~~late~~ book delayed by warehousing & online

2a). Warehousing

$$65\text{K} \times 0.75$$

$$65 \times 75$$

| | <u>WORKING</u> | <u>Total</u> |
|----|----------------|--------------|
| 67 | 3S | 4550 |
| | <u>420</u> | <u>325</u> |
| 5 | 2S | 4875 |
| | 300 | |

Online

65

$$- 48.75$$

16.25

48750 = delayed due to warehousing

16.250 = delayed due to online.

3). Increases in efficiencies.

Warehousing ~~by~~ 50% (WH)

Online by 80% (OL)

$$\text{WH: } 48750 \times 0.50$$

$$= 24375$$

$$\text{ON: } 16250 \times 0.8$$

$$16250 \times 8$$

0

400

1600

48000

80000

4400

$$\begin{array}{r}
 16250 \times 0.8 \\
 16250 \times 8 \\
 \quad \quad \quad 0 \\
 \quad \quad , 400 \\
 \quad \quad 1600 \\
 \quad \quad 42000 \\
 \quad 80000 \\
 \hline
 124000
 \end{array}$$

$$\begin{array}{r}
 16250 \times 8 \\
 \quad \quad \quad 0 \\
 \quad \quad , 400 \\
 \quad \quad 1600 \\
 \quad \quad 48000 \\
 \quad \quad \underline{80000} \\
 \quad 130000
 \end{array}$$

Get better
(concrete).

ON: Increase by 12400 book

4). Total increase on additional books arriving on time.

$$\begin{array}{r}
 13000 \\
 24375 \\
 + 12400 \\
 \hline
 36775
 \end{array}$$

37375, access all grades.
36775 books.

Missed question with junior high. (Method the same).

$$\begin{array}{r}
 36775 \\
 + 2875 \\
 \hline
 13 \overline{) 37375} \\
 - 26 \\
 \hline
 113 \\
 - 104 \\
 \hline
 97 \\
 - 91 \\
 \hline
 65 \\
 - 65 \\
 \hline
 0
 \end{array}
 \quad
 \begin{array}{r}
 2875 \\
 - 26 \\
 \hline
 107 \\
 - 104 \\
 \hline
 37 \\
 - 26 \\
 \hline
 11 \\
 - 10 \\
 \hline
 1
 \end{array}
 \quad
 \begin{array}{r}
 80 \\
 24
 \end{array}$$

$$2875 \times 2$$

$$\begin{array}{r}
 10 \\
 140 \\
 1600 \\
 \hline
 4000 \\
 \hline
 5750
 \end{array}$$

→ \$750 for junior high school

Pdelayed Books.

$$1). \frac{40}{13} \frac{130,000 \times 2}{13} = 20,000 \text{ students}$$

$$20,000 \times 2 = 40,000 \text{ books.}$$

$$2). 75\% \text{ on time}, 25\% \text{ late}$$

$$\therefore 10,000 \text{ late}$$

10,000 @ 75% = 7500 delayed from late delivery (ut)

10,000 @ 25% = 2500 \$1111 from on time (On)

$$3). \text{Wh: } 7500 + 500 = 3750$$

$$\text{On: } 2500 + 800 = 3300$$

4). Total increase in additional books is \$750,

This is a 57.50% increase in number of books delivered, \rightarrow massive inefficiencies still exist.

$$\$750 \times 6.5$$

| | |
|--------------|----------------|
| 0 | <u>WORKING</u> |
| 300 | 345000 |
| 4000 | 28750 |
| 30000 | 373750 ✓ |
| <u>34500</u> | |
| 0 | |
| 250 | |
| 3500 | |
| <u>25000</u> | |
| 28750 | |

BONUS

- 6th → Junior high school
- look at capacity utilization
(existing is 80%).

How many students in 6th grade?

How many enrolled in Junior school?

What is capacity of ~~Junior~~ school?

Current enrollment in elementary = 4800 (6000×0.8)

Utilization will drop.

$$\frac{(4800 - 600)}{6000} = \frac{42}{60} = 70\% \quad \Delta \text{ utilization}$$

$$0.70 \rightarrow 70\%$$

$$\begin{array}{r} 60 \\ \underline{- 42} \\ 18 \end{array}$$

- There was an assumption of 10,000 students per year level (clearly not the case).

Recommendations

→ Junior high already struggles to resource books
• See student.

→ Shifting utilizations may ~~indirectly~~ allocate resources, even after implementing ~~new~~ choose online orders.

→ Under-utilization in elementary, excessive overutilization.
↳ wasted resources.

Overutilization in Junior High

↳ Constraints resources, stressed the system

↳ Underutilized, less achievement ~~the~~ reached

↳ Current: the more is learned per student.
↳ it advised.

Case 9: Mobile Phone Insurance

Bain (London): Round 1

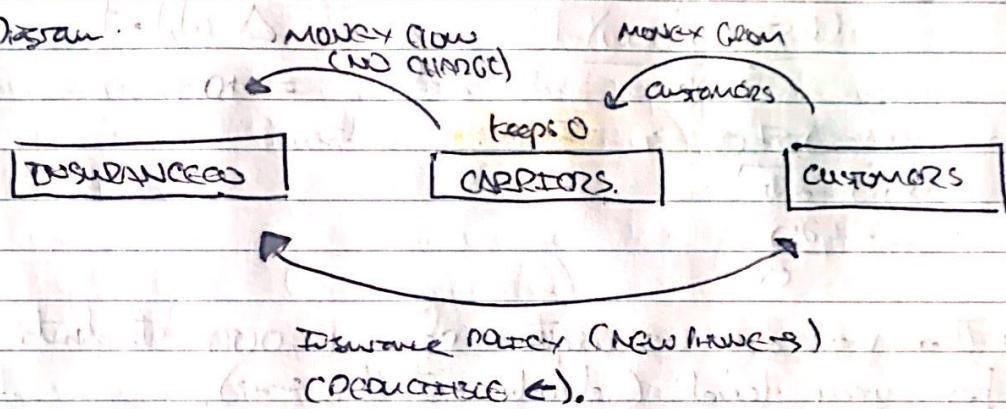
Information

- INSURANCECO
- Fix fee equipment fee for each mobile phone carriers.
- Advice how to increase revenues.

More Information

- MARKET SIZE & SHARE?
- MONOPOLY (CUTTING MARKET TO 4 US CARRIERS)
- Industry (Customer Growth). (none)
- Greater understanding of the value chain.

Diagram



Insurance policy (new things)
(concierge ←).

Framework

Revenue

Price

- Insurance

(Policy, based on rule)

- Carrier charged, paid on the consumer.

- Deductibles, price.

Quantity

- Number of subscribers.

(Carriers)

- Number of subscribers

(Customers)

- Replacement

- Number of deductibles.

MOTIFCO

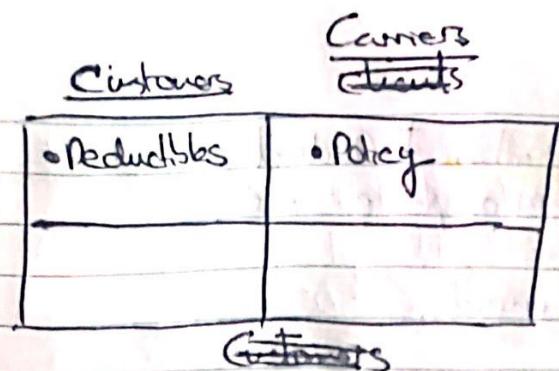
- 40m subscribers

- 20% insurance

- Total of 25x1

in insurance & subscribers to carrier subscribers?

Note: Revenue generated from money they keep from carriers is kept - less replacement costs.



Possible options.

- Adjust price / quantity in existing products. (ARPU).
- Introduce new products to new / existing customers / carriers.

WORKINGS

- 40m @ 20% = 8m
- 40m @ 25% = 10m

- Increase in 2m subscribers to make contributions.
- Increase number of deductions paid to insurance provider.
- Increase in insurance paid out to customers from Insuranceco in the form of hardware.

- ~~No go~~

Initial Questions

Potential channel strategies

- DAC (Insuranceco to Customer)
- Insuranceco to Carrier
- Insurance plans on phones when purchased. (Package deal).

Revenue & costs per customer

- Revenue - Monthly fee (-channel margin) + deductible (\$50).
- Costs (cost of 1 phone)

$$\text{Monthly fee} = \$5.$$

$$\text{Channel margin} = \$0$$

$$\text{Deductible} = \$50$$

$$\text{Cost of Phone} = \$200.$$

Objective = Number of months to break even when a replacement is ordered.

Strategy

Form equation to solve the number of months.

Monthly fee \times Number of months + Deductions
 $\overline{\text{channel margin}} - \text{cost of phone} = 0.$

Solve for number of months.

WORKINGS

$$5x + 50 + 0 - 200 = 0$$

$$5x = 150$$

$$x = 30$$

= 30 MONTHS.

30 months is a long time to repay a phone.

- Remember (travel is a big issue). ~~a cost so not core~~ ~~observers~~.

- Customers will pay for insurance for peace of mind.
(Relatively price-insensitive)
- INSURANCE CO. HAS A MONOPOLY ON MARKET,
WILL NOT BE IMPERFECT BY COMPETITORS.
- CARRIERS DONT WANT ADDED COMPETITION / RISK.

- Recommendation to explore

- Increase monthly fee (after price elasticity analysis)
- Explore statistics / data behind replacement likelihood.
- Explore processes to create customer profile to create a custom monthly fee based on claims history.

Question - what is the impact of MOBIECO if there is an increase in number of subscribers that buy insurance.

Information

| | with Insurance (I) | without (NF) |
|-------|--------------------|--------------|
| ARPU | \$30/m | \$35/m |
| Churn | 2.8% / m | 2.5% / m. |

STRATEGY

- 1). Revenue before with ARPU & Churn. (both without)
- 2). Revenue after with ARPU & Churn. (// " ")
- 3). Calculate difference between 1 & 2.

WORKING

$$\begin{aligned}
 & \text{(NF)} \quad \text{(Iw)} \\
 1). \quad & 40m \times 0.20 = 8m \text{ with Insurance, } \cancel{32m \text{ without}} \\
 & \cancel{30 \times 8m} \times (1 - 0.028) + \\
 & \cancel{\text{ARPU}_I \times NF \times (1 - \text{Churn}_I)} \\
 & + \cancel{\text{ARPU}_{NF} \times I_{NF} \times (1 - \text{Churn}_{NF})} \\
 & = 30 \times 8 \times (1 - 0.028) + 35 \times 32 \times (1 - 0.025) \\
 & = 240m (\text{D})
 \end{aligned}$$

- 1). Revenue before use differences!
- 1). Number of incremental subscribers. & Revenue.
- 2). Reduction in Churn rate
- 3). Add additional revenue from 1&2 together.

WORKING

$$\begin{aligned}
 1). \quad & 40m \times (25 - 20\%) = 2m \\
 2). \quad & 2m \times \$5 = \$10m/\text{month} \\
 2). \quad & \text{Reduction in churn.} \\
 & (0.028 - 0.025) \times 2m \times \$30/\text{month} \quad \text{(base to be} \\
 & \cancel{0.3\%} \times 2m \times \$30/\text{month} \quad \text{conservative)} \\
 & 6000 \times \$30 \\
 & = \$180,000/\text{month}
 \end{aligned}$$

$$3) (10m + \$180,000)/\text{month}$$
$$=\$10,180,000/\text{month} \quad \checkmark$$

Revenue before

$$8m \times 30/\text{month} \times 0.972 + 32m \times 30/\text{month} \times 0.975.$$
$$10m \times 30/\text{month} \times 0.972 + 32m \times 30/\text{month} \times 0.975.$$

CASE 10: Organic Pizza Crust.

Information

- Natural Foods Company
- \$35m p.a (Sales)
- Sells variety of organic bread mixtures.

Objective: Determine

if a good idea or not
to launch a new product
Organic pizza crust.

Hypothesis: Launching a new product, build a case

| Customers | Company | Competitor | Product |
|---|--|--|---|
| <ul style="list-style-type: none"> - Needs & Wants (Do they want it?) - Who are they (Retailer, wholesalers, restaurants) | <ul style="list-style-type: none"> - Processes (Ability to produce / capabilities) - Distribution (use existing channels) - Capabilities (need further financing) | <ul style="list-style-type: none"> - Market size (share) - Growth - Already a product out there? - Segmentation (energy value) | <ul style="list-style-type: none"> - Pricing - Revenue - Costs (Variable, fixed, charges in processes) - Branding (Organic) |
| | | | |

Order

Points to Explore?

- 1). who are the customers & what are their needs?
- 2). what is the market like? Competition?
- 3). Can this product make money? Profit?
- 4). Can our existing capabilities be used to produce this new organic pizza crust?

Information:

- Market growth = 25% p.a.
- Food market: 10% is organic.
- First to enter the market.

Benefit & Costs of first mover advantage

- Market is fragmented.
- Pricing: similar to entry \$3.50/unit.

VC:

| | |
|-------------------|--------------|
| Ingredients | \$1.20 /unit |
| Sales & Marketing | \$1.50 /unit |
| Labour | \$0.30 /unit |

→ Upfront investment: New equipment \$30,000.

- customers demand more organic products & products far have bread machine.
· (need is there).

- Client all value chain capabilities in place.

- Product: A pizza crust customers can bake at home.

- Distribution - gourmet, retail and/or grocery chains.

higher margin, less competition.

Hypothesis:

After receiving information, there seems to be an opportunity to explore.

1) See the market

2). Determine break-even analysis to decide if it is feasible to capture the required market share to break even?

1) MARKET SIZING.

330m in the United States.

as represent the proportion of people who eat.

3 meals a day so total

990m meals a day (assuming everyone eats, not realistic due to poverty).

~~top of food market~~

In America, Pizza is a popular meal.

- Assumption: Pizza consumed once every two weeks on average. (In line with my family's consumption).

- Assumption: Those in organic food consumption will follow same dietary pattern as average hybrid consumers (e.g. Pizza, organic Pizza, chicken, organic chicken etc).

Assumption: Pizza only consumed at dinner (on average) took for intersection of Pizza consumption with the market organic market.

$$\frac{990m}{14 \times 3} \times 10\%$$

2357142 m ~~Pizza per~~
organic pizzas consumed per
evening (clarified for it)

$$\frac{990m}{14 \times 3} = \frac{33m}{14}$$

$\rightarrow 2m$ (Simplicity)

$$14 \overline{) 2357142}$$

$$\begin{array}{r} -28 \\ \hline 50 \end{array}$$

$$\begin{array}{r} -42 \\ \hline 80 \end{array}$$

$$\begin{array}{r} -70 \\ \hline 100 \end{array}$$

$$\begin{array}{r} -98 \\ \hline 80 \end{array}$$

$$\begin{array}{r} -84 \\ \hline 60 \end{array}$$

Breakeven analysis to capture

30,000

BC unit = Investment

$$\text{Selling Price/unit} - \text{VC/unit}$$

= 30,000

$$(3.50 - (1.50 + 1.00 + 0.30))$$

= 30,000
0.50

$$= 60,000 \text{ units.}$$

Market sizing is off as this is easily achievable.

Replies

- 3.30m households
- average of 3 people / household.
- one product consumed per week.
- Pizza on average consumed once every two weeks by the family unit.
(Consumed with own pizza (Home week consumption))

$$\frac{3.30 \text{m}}{3/\text{household}} = 1.10 \text{m households.}$$

$$1.10 \times 2 \rightarrow 1.10$$

= Calculate number of pizzas on 1.10m household consume each year.

$$- 1.10 \times 2 \times 52 \times 12$$

$$= 1.10 \times 24 \quad \text{WORKING}$$

22,000

200

2000

400

4000

$$110 \times 24$$

$$\begin{array}{r} 0 \\ 20 \\ 200 \\ \hline 0 \\ 40 \\ 400 \end{array}$$

WORKING.

$$\begin{array}{r} 2200 \\ -440 \\ \hline 1760 \end{array}$$

$$\begin{array}{r} 1760 \\ -2640 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 0 \\ 2640 \\ \hline 0 \end{array}$$

(Total number of pizzas consumed)

10% of food & assume pizza market
the same.

$2640 \times 10\% = 264\text{m}$ Pizza necks (organic per year)
This is a combination of Bought a Homemade.
- most people will buy / not homemade.

One pizza in every 12 (are per year is homemade)

$$\begin{array}{r} 264 \\ 12 \sqrt{264} \\ -24 \\ \hline 24 \\ -24 \\ \hline 0 \end{array}$$

So 22m Homemade, organic pizzas per year.
first mover advantage, could capture most of it.

3). Determine share of market

Thyros
Cureit

$$\begin{array}{r} 600000000 \\ 600000000 \\ -440000 \\ \hline 1600000 \\ -1540000 \\ \hline 60000 \\ -44000 \\ \hline 16000 \end{array}$$

Only need to capture ~~60%~~
~~16%~~ of market to Breckleven.

0.3%

~~60000 x 350~~

~~60000 x 350~~

~~60000 x 35~~

~~18000~~

~~Worth 16.~~

~~180000~~

~~20 x 350~~

In Recommendation

- Client (Natural Food company) wants to determine if should launch new organic pizza crust product.
- After some market analysis, (as market growth), customer demand the product, you model have first mover advantage as no competition exists at the moment to potentially capture down market size (obliged).
- With existing capabilities & proposed investment, only 0.3% of the market (60000 units) model need to be sold.

You should move into analysing how to implement the ~~close to~~ ^{go to} existing capabilities to produce the product.

(make sure to analyse competitor response so you can get their first)

Case II: Traffic Signal Company.

- small &
- Information
- Start company in
- install & maintain traffic signals
- California

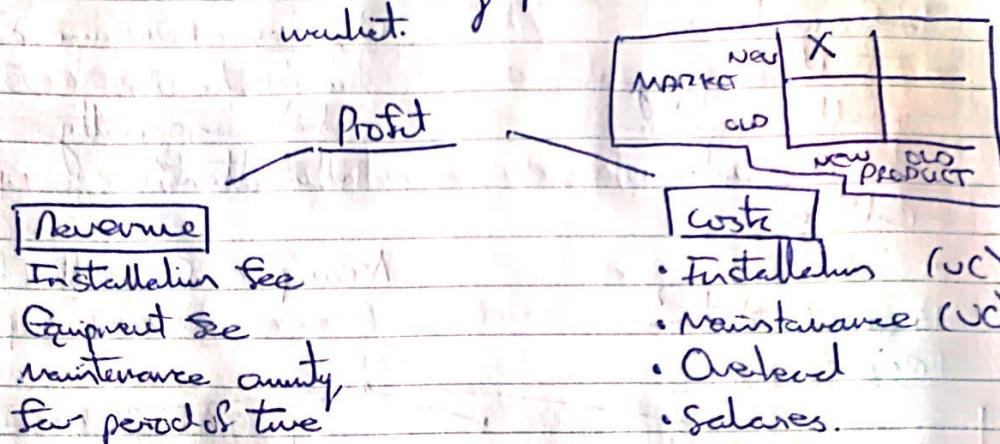
New Markets?
Framework

Objective: Determine if they should enter the tri-state market, especially Manhattan?

Assumption: Expansion to increase revenues & profits!!

| Customers | Competition | Company | Product |
|---|--|---|--|
| <ul style="list-style-type: none"> Municipal? Private sectors Local / State Federal Gov Needs & want - All traffic signals? | <ul style="list-style-type: none"> Who already installs & maintain in tri-state area? Likely Response to a new entrant Market share & size - Growth of new traffic signals installation & maintenance. - What could they capture? | <ul style="list-style-type: none"> Capabilities - Manufacturer? - Be provider, Son Wholesaler? Distribution (able to get supplies & labor from distributor to New York City) Value chain (what is it?) Financial (able to expand), cost of expansion. | <ul style="list-style-type: none"> Maintenance Products/Content Pricing Plans Number of installations. Product w/ - Install only - Maintenance only - Both. Cost. |
| | 2500 to maintain | Only install & maintain. | <ul style="list-style-type: none"> \$100,000. installation fee \$15,000/year (Maintenance on new & old) Cost last 20 years, Replace 1/20 yrs. |

Goal of case: Gain revenues a profit by taking an existing product to a new market.



Other considerations

- Size & Growth
- Competition: Incumbent largest in NORTH EAST
- Business model: Single control for maintaining all traffic signals (largest wins).

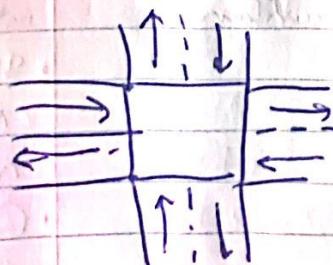
Market size of traffic signals in manhattan.

Setup: Manhattan is a series of blocks, estimate based on population.

Strategy

Manhattan lattice structure.

- 1). Number of People in manhattan
- 2). Number of people per block ~~to find~~
- 3). Find Number of blocks.



Assumption: There should be a traffic signal everywhere a decision must be made at a block (on entry, assumed not exit)

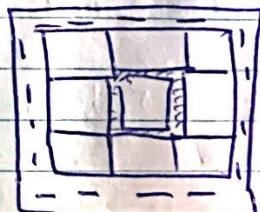
Based on diagram, assume average of 4 decision possibilities per block (entry point).

4). Multiply number of blocks by number of decision points per intersection.

Result

Number of traffic signals to maintain.

- 1). Manhattan has 10m people (assumption)
- 2). Assume an apartment building has 100 people per building with 8 buildings per block.



Block structure (thinking Melbourne).

(blocks to $100 \times 8 = 800$ people per block).

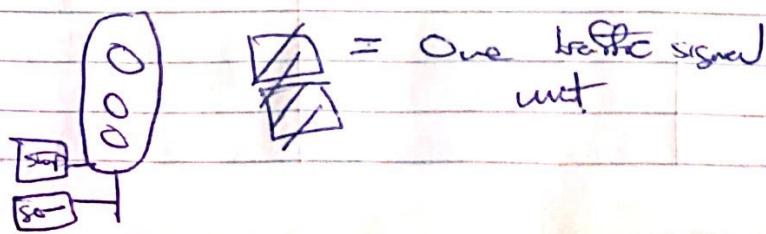
- 3). Number of blocks is $10m / 800$

$$\begin{array}{r} 2500 \\ 8 \overline{) 20000} \\ -16 \\ \hline 40 \\ -40 \\ \hline 0 \end{array}$$

2500 blocks.

10,000 traffic signals.

- 4). With an average of 4 traffic signals per block, 10,000 traffic signals in Manhattan



under way assumptions, could divide by 4
for a better structure if one per intersection.

2500 to maintain.

Two workers, installation & maintenance

Installation

$$= 100k \times 2500 \times \frac{1}{20}$$

$$= 100k \times 125$$

$$= 125,000,00$$

$$= 12.5M\text{kr. / year}$$

Maintenance

$$= 15k \times 2500$$

=

$$\begin{array}{r} 10 \\ 20 \\ \hline 30 \end{array} \quad \begin{array}{r} 300 \\ 75 \\ \hline 375 \end{array}$$

$$\begin{array}{r} 25 \\ \hline 50 \end{array} \quad \begin{array}{r} 1 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ 75 \\ \hline 37500 \text{ kr} \end{array}$$

$$\begin{array}{r} 75 \\ \hline \end{array}$$

$$= \cancel{37500} \text{ / year}$$

$$37.5 \text{ mn}$$

Calculate Net Present value of project?

- Initial Questions

- 1). Costs (Installation & Maintenance).
- 2). Initial investment
- 3). Discount Rate
- 4). Time period

Installation

Cost: Installation (I)

5 workers

Wage rate / worker / hour = \$35

Time per signal = 8 hours

Duration of contract

3 years

Maintenance (M)

2 workers

Time per signal system = 4 hrs

No of signals / year = 2 \rightarrow Assume wage rate the same.

Strategy

- 1). Calculate Revenues for I & M
- 2). Calculate Cost for I & M.
- 3). Use

$$\sum_{n=1}^N (\text{Revenue} - \text{Cost})_n / (1+r)^n = \text{Initial Investment.}$$

WORKINGS

1) Installation Installation

$$\$100,000 \times 2500 / 80$$

Year 1

Year 2

Year 3

Seek clarifications (for NPV analysis example,
 Assume system installed in 1st year & maintained,
 1). Already calculate Maintenance only in years 2 & 3.
 2). Revenues (Carry forward)

Year Installations Maintenance

| | | |
|----|-------|--------|
| Y1 | 12.5m | 37.5m |
| Y2 | - | 37.5m |
| Y3 | - | 37.5m. |

2). Costs.

Installation Maintenance

| | | |
|----|---|--|
| X1 | | |
| Y2 | \$x 35/hour | |
| Y3 | S workers x \$35/hour x 6 hours = 30×35 | 2 workers x \$35/hour x 6 hours x 2 incidents $= \$35 \times 8 \times 2 = 16$ |
| | <u>0</u> <u>final</u> <u>90</u> <u>900</u> | $\$35 \times 2 \times 4 \times 2$ $= \$35 \times 8 = 280$ |
| | <u>0</u> <u>150</u> | <u>40</u> |
| | <u>150</u> <u>\$1050</u> | <u>240</u> <u>\$280</u> <u>30</u> <u>180</u> <u>5</u> <u>30</u> <u>210</u> |
| | <u><u>\$1050 / signal</u></u> | <u><u>\$560</u></u> |
| | | <u><u>\$560 / year.</u></u> |

Note: NO discounting of Cash Flows.
 Transportation costs.

Cash (Annual)

| | <u>Installation</u> | <u>Maintenance</u> |
|----|---|---|
| Y1 | $\frac{2500}{20} \times (1050 + 85000)$ | $560 \times \frac{2500}{20} \underline{2500}$ |
| Y2 | 0 | " " |
| Y3 | 0 | " " |

Add all cash flows using formula in 3) while no initial investment, transportation costs & discounting.

$$\frac{2500}{20} \times (86050) \\ = 125 \times 86050 \\ 86050 \times 125$$

WORKING

| | <u>FINAL</u> |
|---------------|----------------|
| <u>86050</u> | <u>8605000</u> |
| 0 | 1721000 |
| 100 | <u>430250</u> |
| 0 | \$ 10,756,250 |
| 12000 | (Installation) |
| <u>160000</u> | |
| <u>172100</u> | |
| 0 | |
| 250 | |
| 0 | |
| 30000 | |
| 400000 | |
| <u>430250</u> | |

FINAL

$$\frac{560 \times 125}{560} \underline{56000}$$

$$\frac{56000}{56000} \underline{56000}$$

$$\frac{1000}{1000} \underline{1000}$$

\$ 69,000 $\times 20$ (Maintenance)

$$\frac{300}{300}$$

$$1500$$

$$\$ 69,000 \times 20$$

$$= 18000$$

$$\frac{120,000}{138,000,0}$$

$$= \$1.38 \text{ m.}$$

NPV

See

$$+ Y_1 (12.5 + 37.5) - (10,756,250 + 1,380,000)$$
$$+ Y_2 ((37.5m) - (1380000)) \times 2$$

Inclusion + maintenance cost Y_1

$$= \underline{\$0} \rightarrow$$

$$\begin{array}{r} 10,756,250 \\ - 1,380,000 \\ \hline 9,376,250 \end{array} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} \text{S. Add, not subtract!}$$

\\$0,000,000

9,376,250

40,634,750

Y_1 NNP

\\$0,000,000

09,376,250

40,623,750 (Y_1 NNP)

$Y_2 + Y_3$ NNP

378⁴00000

- 1380000

36120000 $\times 2$

72240000

NPV = 40,623,750

+ 72240000

112,863,750.

NPV (NO Discount) is 112,863,750

\\$112,863,750.

Redo NPV with better structure

Revenue for Y1

37.5m

+ 12.5m

50m.

Maintenance & Installation Cost Y1

$$\begin{array}{r} 10756250 \\ + 1380000 \\ \hline 12136250 \end{array}$$

NPV Y1

$$\begin{array}{r} 50,000,000 \\ - 12136250 \\ \hline 47863750 \end{array}$$

Revenue (Y2 + Y3)

$$37.5m \times 2 = 75m$$

Maintenance cost Y2 + Y3.

$$\begin{array}{r} 1.38m \times 2 \\ \hline 16 \\ 60 \\ 2.00 \\ \hline 2.76m \end{array}$$

NPV Y2 + Y3.

$$75m - 2.76m$$

$$75.00$$

$$- 2.76$$

$$72.24m$$

NPV -

NPV (Total)

$$\begin{array}{r} 47863750 \\ + 72,240,000 \\ \hline 120,103,750 \end{array}$$

$$\begin{aligned} \text{NPV} &= 120,103,750 \text{ mrs.} \\ &\approx 120 \text{ mrs.} \end{aligned}$$

Why bid at a loss.

- Strategic to enter a large market, consider further expansion opportunities in other areas in New York. More cities in the future.

Recommendation

- Profitable venture with an NPV of 120 mrs.,
- Much influenced by Market size/ number of intersections to be serviced.
- May have to bid at a loss to lock in the contract, however, this would be a strategic advantage.

Picks a Redaction

- Investigate discrepancies in scaling up operations in a large city.

Next steps

Investigate bidding history to determine an appropriate premium to charge account for in the bidding process.

Case 17: Travel Channel.

- Cable television channel
- Specializes in travel
- Programs cover popular travel locations & expose users to international cultures.
- Lacks an audience & not making money

Objective

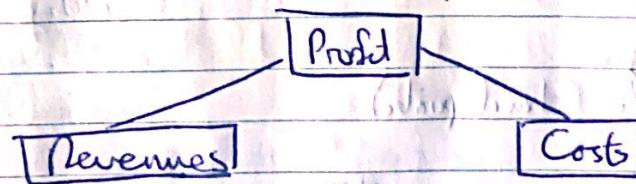
- Provide recommendations to improve financial performance.

Hypothesis: There will not likely be a method to make money.

Initial Response:

- Need to know
 - Customers (Target audience, demographics, want/need)
 - Competition (Competitive landscape, MS; growth)
 - Company (Value chain - Production, Distribution, Marketing)
- Product (Locations aired, types of program, Segmented audience)
 - (Current Revenues / Streams a Cost)

After, explore a profitability matrix



- Network (Sky, etc)
- Advertisements from travel agency / travel locations etc.
- Production costs
- Production
- Network (Travel)
- Infrastructure

(Guard after receiving information).

- The client wants to know the type of audience to pursue.
- Currently making a loss & wants \$5m profit (a year).
- 3 demographies:
 - Luxury travellers
 - Budget travellers
 - Adventure travellers.

Brainstorm

Revenue Streams

- Network fees
(Advertiser neutral)
- Advertising Revenue
(Tourism agencies, ...)
- Countries

Costs

- Production cost
 - Marketing
 - Content
 - Administration

Total annual cost
are 100M/year.

Advertising

Revenue / ad slot

- Luxury (\$30 / 1000 views)
- Adventure (\$35 / 1000 views)
- Budget (\$10 / 1000 views)

Cost categories give

- 2.5% subscription fee
- three year
- 70M.

100 ad slot / day

365 days / year (travel quota)

Estimated Revenue Per categories.

| | Revenue |
|-----------|---------|
| Luxury | 80,000 |
| Adventure | 50,000 |
| Budget | 150,000 |

Strategy:

Determine mix of users to maximize profit.

Strategy:

② Determine ~~mix~~ ~~ad~~ to maximize profit.

(~~ad~~)

- 1). Determine maximum number of ad slots.
- 2). Determine revenue by per ad slot for each demographic
- 3). Allocate ad slots to determine demographic mix based on maximising revenue.
- 4). Determine overall ~~mix~~ revenue (~~ad~~ + subscription).
- 5). Determine profit

WORKING

First

- Competition & likely response
- Will the channel capture all these users?

Response

- No other competitors
- Additional revenue streams include mechanics, digital media, product placement, licensing (think Disney).

WORKING

$$1). 100 \times 365 \\ = 36500 \text{ slots / year.}$$

$$2). \text{Revenue} \\ 30 \times 80 = \$2400 / \text{slot}$$

NOTE:
 $\frac{\$/\text{hour}}{\# \text{users}}$.

Revenue

$$\frac{\$35 \times 80}{25} = \$1120 / \text{slot}$$

$$\frac{1120}{100} = \$11.20$$

Budget -

$$\$10 \times 1500 \\ = \$1500 \text{ /slot}$$

Revenue Ranking goes

- 1). Wavy
- 2). Adhesive
- 3). Budget.

Comment

Since wavy most will lead to most revenue;
no other competitor exists & may lead to
more lucrative additional revenue sources
(Cruises, Holiday pads, Wavy). It makes less
sense to target this demographic primarily.

If competitor existed (or enters the market),
it may be best to consider a mix of products
demographics. We will perform the calculation
regardless to determine if profit made on adhesive
& budget to see the channel options.

③. Tell 3500 slots to ~~Wavy~~

Is less

4). Revenues

Subscriptions

$$0.05 \times 70m \\ = \underline{\underline{17.5m}}$$

Add

Budget

$$1500 \times 36500$$

$$15 \times 365$$

=

36S x 15
WORKING

| | |
|--------------|---------------------|
| <u>36S</u> | <u>Final</u> |
| 2S | <u>3650</u> |
| 300 | <u>1825</u> |
| <u>1500</u> | <u>\$ 4,750,000</u> |
| <u>1.825</u> | |

Luxury
 $36S \times 12\frac{1}{4}$

| | |
|-------------|---------------------|
| 1P | <u>WORKING</u> |
| 120 | <u>\$ 7300</u> |
| 600 | <u>\$ 1460</u> |
| <u>730</u> | <u>\$ 8,760,000</u> |
| 20 | |
| 240 | |
| <u>1200</u> | |
| <u>1460</u> | |

Adventure
 $36S \times 17.5$

| | |
|-------------|----------------------|
| <u>36S</u> | <u>WORKING</u> |
| <u>36S</u> | <u>36500</u> |
| 35 | <u>25500</u> |
| 420 | <u>1815</u> |
| 2100 | <u>\$ 6386.5</u> |
| <u>2555</u> | |
| 15 | <u>\$ 63,865,000</u> |
| 300 | |
| 900 | |
| 1500 | |
| 1815 | |

| Summary | Ad | Subscription | Total |
|-----------|----------|--------------|---------|
| Luxury | \$ 87.6m | 17.5 | 105.1 m |
| Adventure | 63.865m | 17.5 | 81.365m |
| Budget | 54.75m | 17.5 | 72.25m |

| Revenue | $\text{Revenue}_i - 100M$ | $i = \{\text{Luxury, Adjective}\}$ |
|---------|-----------------------------|------------------------------------|
| Budget | Ad | Subscriptions |
| 105.1 | $105.1 - 100 = \$5.1M$ | |
| 81.365 | $81.365 - 100 = -\$18.635M$ | |
| 72.75 | $72.75 - 100 = -\$27.25M$ | |

$$\text{Decision} = \max \{ \text{Revenue}_i - 100M \}$$

This is

Recommendation:

After analysing the revenue streams of 3 demographics, we advise you to target **Luxury** customers to generate **\$5.1M** in profit to reach **Financial objective**. The other segments will lead to a loss if additional revenue streams won't be added.

Risks

Consider Competitor response

The profit includes \$5.6M in ad revenue for 36500 slots/year, \$17.5M in channel subscription fees & 100M.

Risks

- Consider competition entry & the ~~is~~ falling viewers Csmll margin for even
- Review subscription fee from cable company.
- Look at opportunities to diversify revenue streams through product placement & merchandising.

Case 13: Best Buy

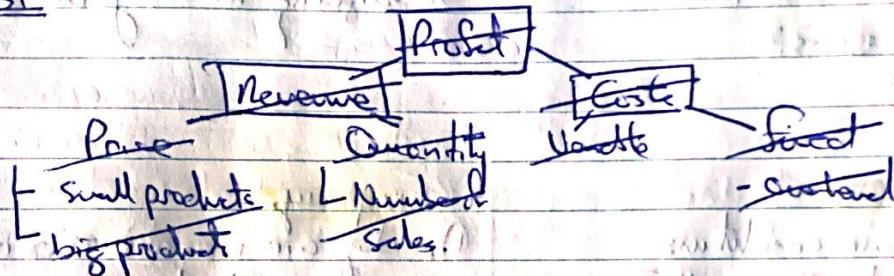
- Sales down
- Inventory rising
- Circuit City bankrupt
- Walmart main competitor
- 200 major stores big products
- Great success
Successful, bought in TB revenue.

Objective

- What does BB do ST to ↑ profitability
- What does BB do LT to ↑ competitiveness.

How to serve a business?

ST



Inventory

- Products
- (Δ)
- Customers
- (Δ , existing)

Revenue

- Pricing
- (Zero margins, cannot lower price)

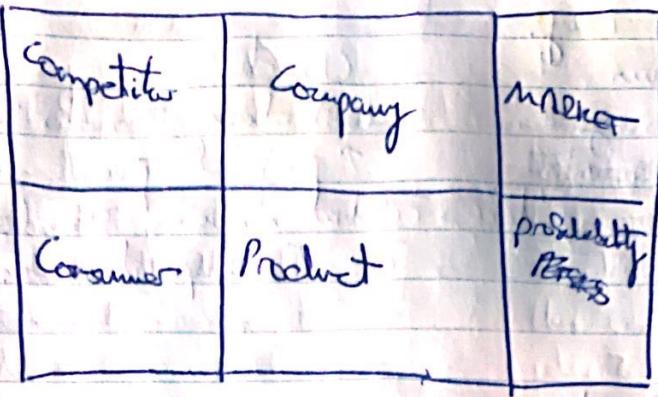
Costs

- Variable
(wholesale cost per unit)
- Fixed
(Labour, overhead, electricity, machinery).

Other

Competitor

- What is Goodwill doing?
- What did Circuit City do?
(Are we doing the same?)



Competitor

- 1). What do others do obviously
- 2). What are their margins?

Consumer

- 1). Δ in taste/preferences
- 2). Bad publicity?
- 3). Targeting the wrong demographic?

Market

- Economic conditions
- Stagnating growth?
- Market share & size for company?

Company

- 1). Why are margins zero on major products, minor products not selling?
- 2). Lack identity?
- 3). Issues in value chain
(causes for no ~~margin~~)
- 4). Only sell electronics?
- 5). Distributions (not changing with market).
- 6). Staff

Product

- 1). Inventory rising
(Technological Δ, products obsoletes?)
- 2). Niche products not priced correctly?
- 3). Outpaced by
Wal-Mart &
Greek supply

Profitability

- Revenue {
- 1). Pricing strategies incorrect.
 - 2). Quantity of products
(add stock or wait sellers)
- Costs {
- 1). Variable (switch wholesalers)
 - 2). Fixed (cut unnecessary
salaries, overhead?)

Need more information, explore profitability first
(Δ Revenues / costs) then address strategy in comparison
to competitors.

Technology obsolete, push quicker, lower prices.

- Investigate salary structure (commission vs fixed)
- Explore other distribution channels (brick & mortar vs online).
- May have inexperienced salespeople, salespeople need training
- Will not compete in price with Walmart, may need to consider other options.

Note: Not heard of this suggestion

↳ Utilise leverage with suppliers since fuel caps consumer area. Use a shared revenue model to spread the risk.

Very interesting case, we determine what to do short term
over long term without much justification

SI

- Cut cost
- Send back to suppliers
- Raise prices

LT

- Improve distribution channels (hybrid brick & mortar, Online)
- Focus on in-store experience
- Train staff
- Consider strategic acquisitions (e.g. Exxon vs Shell)

NOTE: If fast busine

Case 1b: All-MART (McKinsey: Round 1)

Information

- Discount supermarket
similar to Wall Mart.
- Interested in entering the market in Romania
- McKinsey to help (Investigation).
- Planning to open in the New Market

Objective:

Enter the Romanian market.
What factors would make this consider if it's a good idea?

Framework

| | |
|---|--|
| <u>Competition</u> <ul style="list-style-type: none">• Who is already there?• N. Structure• Pricing strategies• Response to new entrant? | <u>Customer</u> <ul style="list-style-type: none">• Romanians needs/wants (All-Mart Super)• Target customers.• Demographics (Socioeconomic profile) |
| <u>Company</u> <ul style="list-style-type: none">• Go-to-market strategy• Distribution channels accessible• Sufficient capital to expand• Value chain available (Wholesales → Stores in Romania) | <u>Product</u> <ul style="list-style-type: none">• Discount Pricing strategy• Subset of products• Costs<ul style="list-style-type: none">- Production- Material shipping, OH.• SG & A, administration. |
| <u>Market Study</u> (Romanian Market) <ul style="list-style-type: none">• Growth opportunities• Accessible to other markets• Market share available? | <u>Other</u> <ul style="list-style-type: none">• Better to buy a competitor• Strategic M&A• Strategic Partnerships• Language barriers• Investment costs. (Are off?) |

Good strategy for new market case

- 1). Market entry possible? (NS, south, competition).
- 2). Cost savings / Profitability available
- 3). Assess strategy

(Set w/ overall culture / strategy; align w/ global expansion experience, is there a first mover advantage?).

Question: Size the market

What potential MS can All-new realistically capture?

Is this a big market size?

Information

$$3 \text{ RON} = 1 \text{ USD}$$

Population in budapest = 2m

Avg salary / person = 1350 RON / month.

Questions: What is the spending habit comparison

Food 30%.

500 / year in electronics.

2. Rent / utility 40%.

Clothing 5%.

250. Various.

Assumption: Since we are a discount retailer, assume consumers would buy food / clothing & electronics as market size.

Total expenditure is ~~1350 RON / month~~ ~~2m people~~
~~x 12 months / year~~

1350.

Strategy

- 1). calculate Total Budapest person spends. per year.
- 2). calculate shoe from food + clothing
- 3) calculate shoe from electronics.
- 4). Add together & convert to USD
- 5). make a judgement

WORKINGS

1). $1350 \text{ Ron / month} \times 2 \text{m people} \times 12 \text{ months / year}$

$$\begin{array}{r}
 = \frac{2700}{12} \times 12 \\
 = 2700 \\
 = 27000 \\
 = 27000 \\
 = 32400
 \end{array}$$

$\Rightarrow 32,400 \text{ Ron / year}$

2). Food + clothing -

$$= 30\% + 5\%$$

$$= 35\%$$

$$\begin{array}{r}
 32400 \times 0.35 \\
 = \frac{32400}{1200} \times 35 \\
 = 972000
 \end{array}$$

| | <u>Working</u> | <u>Working</u> |
|---------------|-------------------|---------------------|
| 6000 | 972000 | 972000 |
| 90000 | | |
| <u>97200</u> | 162000 | 162000 |
| 2000 | | |
| 10000 | | |
| <u>150000</u> | 98820 | 11340.00 |
| <u>162000</u> | | |

$$= 98820 \text{ Ron} \quad 11340 \text{ Ron / year}$$

3). \$500 (stated). 1 year / person.
 $500 \times 2m$
= 1000m. USD.

3 m = 1 USD
 $1000m \times 3 = 3000m.$

Total spend per year is.
 $(1340 + 3000)m$
= 14340m / year.
Convert to USD

$$\begin{array}{r} 4780 \\ 3 \sqrt{14340} \\ -12 \\ \hline 23 \\ -21 \\ \hline 24 \\ -24 \\ \hline 0 \end{array}$$

IS 4,780.m USD.
- 4,780 IS is a very large (reasonably) market to start in).

What can be All-new reasonably capture in the market? - need information on competitive landscape.

5 outshot stores cover 30%, the rest served by smaller stores in the city

Assume an even share of the market (Same All-Mart would be a superstore).

$$4.78B \times 0.30$$

$$= \frac{4.78 \times 3}{24}$$

$$= 0.10$$

$$12.00$$

$$\underline{14.34}$$

$$1.434B.$$

$$0.239B.$$

$$6 \overline{) 1.434}$$

$$- 1.2$$

$$\underline{23}$$

$$- 18$$

$$\underline{\underline{54}}$$

$$- 54$$

$$\underline{0}$$

Assume All-MART has a 23% in R (USA) potential market).

there are other factors to consider.

- ARPU,
- churn rate (likely to leave store a shop at another)
- Other distributions & sales (overhead on RUS).
- (Market share would actually be smaller).

23% (from a slide)

- S). 23% may be worth the expansion after probability & cost savings are considered.
the position in Romania may make it easier to expand to
~ ~~140~~ is other markets in Europe.

Additional Information

Food from local distributor
clothing would be same as US (Briar
contractor).

Electronics same component as US
(Global partner).

Domestic salary Six less than US.

→ food + salary would achieve cost savings
as goods locally cheaper as US have to
ship everything in. Salaries are Six less.

Breakdown

Food (4%) ← Could assume another fraction.

Clothing (20%)

Electronics (40%)

Salary (41%) 20% less.

Effective = ↑ 68% US costs.

Recommendations

- The expansion has a potential to capture ≥ 39m in sales after market entry.
- There are 68. 32% reduction in cost (savings)
estimate food, lower food & salaries due to local suppliers
& lower wages.
- Consider how competitors would respond and
how this fits with your overall strategy when you
explore / evaluate before expanding!

McKinsey advised Ge : L'Oréal plc.

Information

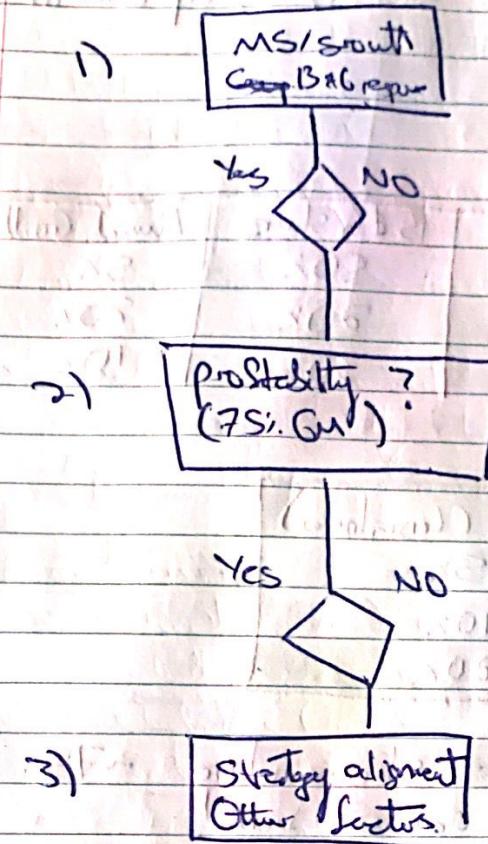
- Major consumer products company (80 countries)
- Operate across all categories in the consumer products space.
- Began losing share to key competitors (B&G)
- Very keen to rebound / build share in main categories (Especially traditional perfume brands) B&G has strong brands.
- Skin care most TC (~75% vs 30% laundry)
- L'Oréal at entry skincare and does not currently operate in that space.
- L'Oréal is a market leader in diverse laundry segments.

McKinsey hired to help evaluate entry into strategy into skin care market. (A B&G stronghold).

Initial hypothesis (Assuming confident skincare is the market they want to target?).

- 1). Chinese skincare Market Size & Growth (Possible to enter, possible competitor response?)
- 2). Established a gross margin of ~75%.
- 3). Is will profitability, revenues, is the chinese market the best option?
- 3). Does this entry align with the overall strategy & culture? Are there existing capabilities to aid the aid the expansion?

Frameworks



Considerations

| Customer | Product |
|--------------------------------|--------------------|
| Do other products serve needs? | Unit types SK |
| Target consumer, opt. | Revenue/Pricing |
| Other clients | Cost |
| Distribution Network | WFO/H, New Markets |
| Suppliers | Competition |
| | B&G + others |
| | Response |

Revenue objective since ambiguous

- What are they trying to achieve
- = Can long-term achieve revenue of \$100m in 2 years
- true in a market with growth opportunity,

Based on the Revenue Framework, the question, the following factors would be assessed (Supply)

Market

Market size & Growth
Segmentation
Competitor response
Consumer trends

Revenue

Quantity (Volume Projections)
Price

Other factors

- Diversify existing MS
- Gateway to SE markets
- Global Manufacturing

Maths Question: How will B&G's MS change two years? (Remain static quo, up down or same?)

Information

| Market Segment | Current MS (mt) | B&G Share | Avgd Growth Projected |
|-----------------|-----------------|-----------|-----------------------|
| Skim Lightening | 1000 | 50% | 5% |
| Anti-ageing | 700 | 20% | 20% |
| Moisturizing | 300 | 30% | 10% |
| | \$2000 | | |

Business = Euro Company? (Chamber)

| SL | Prod | Sh. |
|----|------|-----|
| AA | | 10% |
| M | | 20% |

3rd figure (not needed) \rightarrow Shows above ~75%.

Gross margin from segments come from!

Strategy

- 1). Project of market segments for 3 yrs.
- 2). ~~determined by companies~~
- 3). Determine MS for both companies.
- 4). Determine Δ in B&G MS.

WORKINGS

Market

| $Y=0$ | \rightarrow | $Y=1$ | \rightarrow | $Y=2$ |
|-------|---------------|-------------|---------------|------------|
| 1000 | (+50) | 1050 | +55 | 1105 |
| 700 | 140 | 840 | 168 | 908 |
| 300 | 30 | 330 | 33 | 363 |
| 2000 | 30 | <u>2220</u> | <u>256</u> | <u>263</u> |

Market Share:

- 2). Shares for each company.

Total market

110S
1008
363
2476

SS2.S

B&G MS (Total in Year 0)

$y=0$

1000

700

300

~~300~~ %

~~20~~ 50

~~32~~ 20

30

$y=0 \times \%$

500

140

90

730

$y=2 \times \%$

110S

1008

363

2476

~~12~~ SS2.S

~~1000~~

201.6

108.9

2476

730

2000

$y=0$

200 730

200 730

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Redo calculator

$$1000 \times 0.5\% \\ = \$ 1050$$

$$1050 \times 5\% \\ =$$

$$1050 \times 0.05$$

$$1050 \times 5$$

0

250

0

500

5250

↑

Musical Calculator

New Table

| | |
|---------------------|-------------------------|
| $\Rightarrow Y = 3$ | |
| SL | 1000.25 1102.5 |
| AA | 201.6 1008. |
| M | <u>108.9</u> <u>363</u> |

346%

50% 50 551.25

20% 20 201.6

30% 30 108.9

861.75

861.75 J 2473.5

(Round 50% estimated)

2474 J 862 0.

MARKET
2474

B46
800

Implications on revenue (Gross margin using ~~3rd table~~
~~2nd table~~)

$$\begin{array}{r} 0.3484 \\ \hline 2474 \times 8620 \\ - 7422 \\ \hline 11980 \\ - 9896 \\ \hline 20840 \\ - 19792 \\ \hline 010480 \\ - 9896 \\ \hline 0584 \end{array}$$

$\overbrace{\hspace{10em}}$
 2474×3
12
210
1200
6000
 $\overbrace{\hspace{10em}}$
 2474×4
16
280
1600
 $\overbrace{\hspace{10em}}$
 2474×8
32
560
3200
16000
 $\overbrace{\hspace{10em}}$
 19792

Get correct answer ✓
→ Step

$$\begin{array}{r} 1600 \\ 8000 \\ \hline 9896 \end{array}$$

$$\begin{array}{r} 2474 \times 8 \\ 32 \\ 560 \\ 3200 \\ 16000 \\ \hline 19792 \end{array}$$

Expectations for Looitree

| Market in Year 2 | % SGR L | Revenue |
|------------------|---------|---------|
| SL | 5% | 55.125 |
| AA | 10% | 100.8 |
| M | 20% | 72.6 |

WORKINGS

$$363 \times 0.2$$

6

120

600

72.6

$$1102.5 \times 5$$

2.5

10

0

500

5000

551.25

Total Revenue

55.125

100.8

72.6

\$ 228.525

Fees

Looitree forecast to earn \$ 228.525 million in revenue in Year 2 of market entry. Co-delivery the first component of the objective. It's entered all 3 segments simultaneously.

It's choose one, target category to meet 100m threshold in objective.

BaCo

Information

- Global Company
- Non-alcoholic Beverages.
- North American Market.
- Customers are Retailers, Restaurants, bars & Whole-Sales.
- More competition now (BarCo & BevCo)
- Pressure margins?
- What recommendation?

Objective

Strategy: tradeless regions.
(Revenue / costs)

HYPOTHESES

Yes, we can address margins?

Framework

Customer

Why are customers switching?

Δ in needs?

Price substitutes

Competitor

Who are they?
Which customers?
Is few the large
existing players.

Market

Market share
South in segments
Existing vs New Market

Company

Our response
Value chain
(Producers market,
Retail distributor)

Product

- A new product needed
- Distribution network
- Segmentation?
 - Sugar (Candy, drink)
 - Juices
 - Tea
 - Water
 - ~~Food~~ less south.
 - Gassy, Pict

Financial

- Margins
- Price Δ?
- Cost Δ?

Volumetric Δ

Make Hypothesis:

- Δ causes other companies
by Δ in market capture.

Interpretation of Exhibit A.

- Five in margin decline most likely for Juice. as sales dropped from 360 to 360m to 18m to 9m.
- Prints with adverse health (Sugar, Diet & Tea/Coffee) negative decline (marginally).
- Water, Sports & Energy have growth potential but are unstable at the moment.
- Growth in Water, Sports & Energy did not offset loss in Juice.

Questions

Will those brands continue? ~~coming sequentially~~

Can we trust one year of information?

How many of customers are switching product in the same brand vs Δ brands?

Math Question:

| Product | Basic Calculations | | | STRATEGY |
|------------|--------------------|--------|----------|---------------------------|
| | Sales LY | Growth | Sales TY | |
| Sugar | 41 | -5% | 38.95 | 1). LAST YEAR (LY) Sales |
| Juice | 18 | -50% | 9.00 | 2). THIS YEAR (TY) Sales. |
| Water | 17 | 15% | 19.55 | 3). $\% \Delta$ (Growth). |
| Diet | 15 | -4% | 14.40 | |
| Sports | 5 | 23% | 6.15 | |
| Tea/Coffee | 3 | -6% | 2.82 | |
| Energy | 1 | 100% | 2.00 | |
| | 100m | | | STOPO |
| | | | | 67.50, A |
| | | | | 25.37 B |
| | | | | 92.87 |

Calculations

$$41 \times 0.95$$

$$41 \times 95$$

$$\underline{360}$$

$$\underline{3690}$$

$$17 \times 1.15$$

Sales Increase
7.15%

$$\underline{9}$$

$$\underline{205}$$

$$\underline{17 \times 115}$$

$$15 \times 0.96$$

$$\underline{200}$$

$$\underline{38.95}$$

$$\underline{1700}$$

$$15 \times 96$$

$$\underline{5}$$

$$\underline{\underline{35}}$$

$$\underline{\underline{170}}$$

$$\underline{\underline{1350}}$$

$$\underline{50}$$

$$\underline{\underline{35}}$$

$$\underline{\underline{50}}$$

$$\underline{\underline{90}}$$

$$\underline{35}$$

$$\underline{\underline{35}}$$

$$\underline{\underline{19.95}}$$

$$\underline{\underline{60}}$$

$$\underline{\underline{30}}$$

$$\underline{\underline{14.40}}$$

$$\begin{array}{r}
 5 \times 123 \\
 500 \\
 100 \\
 \hline
 15 \\
 \hline
 6.15
 \end{array}
 \quad
 \begin{array}{r}
 3 \times 0.94 \\
 \underline{3 \times 94} \\
 270 \\
 \hline
 12 \\
 \hline
 2.82
 \end{array}$$

3). 92.87

$$\frac{78.13}{100} = 78.13\% \text{ decrease. } \checkmark$$

Brainstorming consumer drivers

- Adoption of Active / Healthy life styles. (hob, sport, gym)
- Shifts to corner coffee/tea at home due to cost (I have started doing this)
- Trends are such consumers, therefore present in bars, restaurants, retailers & wholesalers.

Relate to demographic trends

(Introduction of new consumers coming waves).

Brew co assess US energy drink market to target young males in 16-32 ~~years~~ age group.

Assumption (Current proportion of energy drink sales for BEUCO can't be used).

- use top down approach.

Strategy

- 1). Population of US
- 2). Apply rough bellcurve distribution to get number of people 16-32. (in millions)
- 3). Half to get males (50:50 proportion & round to nearest). Assume don't account for trans/non-binary).
- 4). Approximate number who would drink energy.

1). USA: 330m

2). Bell curve for population.



Approximate 30% under the curve.

$$\begin{array}{r} 330 \times 30 \\ \hline 0 \quad 99.0 \text{m.} \\ 90 \\ \hline 900 \end{array}$$

99m US 16-32 year olds.

$$\begin{array}{r} 3). \frac{99}{2} \quad \frac{44}{2} \quad \frac{49.5 \text{m.}}{2} \\ \hline 49.5 \quad 22.5 \quad 24.75 \end{array}$$

$\begin{array}{r} -8 \\ \hline 19 \end{array}$ $\begin{array}{r} -8 \\ \hline 19 \end{array}$

$\begin{array}{r} -16 \\ \hline 30 \end{array}$ $\begin{array}{r} -18 \\ \hline 10 \end{array}$

16-32 US males = 69.5m

Assumptions:

High proportion of students / sports players / yopas who would cause energy dents. — 80%.

$$49.5 \times 0.80$$
$$= 49.5 \times 80$$

4.0

7.2

$$\frac{320}{3960}$$

39.60m us 16-32 users who cause energy dents.
multiply #

New steps

(1)

5). Multiply $39.60m \times$ Average Poo per energy dent \times
 $\sim 40m$ number of energy dents/distance year. (2).

(Fast)

Need these

6). Ben Go market share (\times (5)).

Apple = \$3

20 dents / year

Gross margin = 20%

10.75

11.06

12.00

11.35

45.16

(very close to
2019!).

C, good estimate!

$$39.60 \times 3 \times 20$$

$$= 39.60 \times 60$$

0

3.6

54

180

237.60

= 237.60

237.6m

2.376 B.

$$2376 \times 0.05$$

$$2376 \times 5$$

30

350

1500

10000

118.80

→ Captive 118.80m

(Population maybe too high).

(Not too high).

$$\begin{aligned}
 \text{Profit} &= \text{Revenue} \times \text{Gross margin} \\
 &= 118.80 \times 0.20 \\
 &= 118.80 \times 0.20 \\
 &\quad 1.60 \\
 &\quad 16.00 \\
 &\quad 20.00 \\
 &\quad \underline{200.00} \\
 &\quad 237.60
 \end{aligned}$$

23.76m Profit.

Statement

↳ Interpret: ~170m Revenue & 23.76m Profit
 huge potential as eclipse
 Eclipse both Juice & Sugar
 (Double current revenue!).

Recommendation: Target Energy segment as
 consumer trends change leading to
 large growth, switch to can
 118.80m Revenue, 23.76m profit if
 Capture 5% US 16-32 market
 market share.

Next Steps: Focus on viability of energy to capture
 market but not too much to
 cannibalize juice & water too early

- Assess product capabilities for every
- Competitor response to capture
- energy market
- Assume energy can cannibalized at the stage).

Case 17: Mosquito Repellent.

- Information
- Client is a packaged goods company
- Massachusetts
- Manufacture & sell two mosquito net products
- One decorative product (outdoor)
- Swatter
- Manufacturer outside, sold in US.
- PMF 2005: 20%
[2006 2007] 20%

Framework

| Market | Consumer |
|---------|--------------|
| | |
| Product | Distribution |
| | |

Objective

- Unstated decline of margins
- 3 to 4 ideas to boost margins.

Hypotheses

- There will be a reason, explore the different drivers of margins.

Strategy → Assess each in turn.

- 1). Market Conditions
(Growth, Share, Competitor Responses)
- 2). Consumer Preferences
(Δ in lifestyle, needs / wants)
- 3). Product Drivers
(Revenues Cost)
↳ Pricing Values Fixed Variable
↳ Transportation
- 4). Manufacturing / Distributions
(Supply shortages, delays, change in suppliers, transport links)
- 5). Other
(Brand, culture)
↳ Utility, commoditized?

Most likely a Profitability style case.

Maths Questions: Calculate Revenues, Costs & Profits for years 2006 & 2007. Understand how the profit product mix affected those values.

Information:

Revenues: \$1M in 06, \$0.9M in 07

Costs: \$0.8M in 06, \$0.9M in 07.

Profit: \$0.2M in 06, \$0.1M in 07.

Question:

Is there any information breaking these values down further (by product mix or cost type).

| Type | Decoration | Product | Year |
|---------|------------|---------|------|
| Revenue | \$ 0.5M | \$ 0.5M | 06 |
| Costs | \$ 0.4M | \$ 0.5M | 07 |

Costs:

| | | | |
|----------|---------|---------|-------|
| Fixed | \$ 0.5M | \$ 0.5M | 06/07 |
| Variable | \$ 0.3M | \$ 0.5M | 08 |
| B | \$ 0.4M | \$ 0.5M | 07 |

Key Questions:

- Why did Decoration decrease 0.1M (Price, value Δ?)
- why did Variable decrease increase 0.1M?
(which product do they belong to?)
↳ Transportation?

Fixed cost remained the same - No expansion in capacity

Why?

Brainstorm Revenue ↓

Price increases due to one electric product

Introduction of new competitive product

New International effort to save resources.

lower values?

Cots

- Material costs increase (oil, metal, aeratives)
- labour (contractors of raw labour rates/rates)
- OH (depreciation would proxy increase for this pocket).
- Greater distribution costs?

Reasons

- Increase in oil price
(Product burns oil, cutters less likely to burn the oil due to higher cost)
- Oil's increase in price increases transportation costs

Recommendation: The decline in profit margins from

2006 to Q1. from 05 £07. is due to two major reasons. Revenues for aeratives decrease. D.M. & variable costs as consumers did not want to incur additional costs & an O.I. increase in transportation costs. Both incurred by an increase in the price of oil.

Next step: 1. Investigate oil future to hedge Risk of

fluctuating oil prices for transportation.

2). Supply oil at wholesale price to cutters (affordable) } refit.

3). Investigate alternative burning fuel for the aeratives.

4). Investigate location of distribution centre from manufacturing, move closer to reduce transportation costs.

Risk: Oil prices continue rise, import through locking competitive enter the market to address customer needs. Advertising & sales need to retain market share.

(Cost benefit analysis on best option to take first, viability)

Could expand to new markets or a product mix to be less dependent on oil (mosquito net / screens).

Also explore regulatory controls or
abnormalities in mosquito populations (e.g.
low year for # of mosquitoes), less pollution/still water,
Economic Recession, less holidays.

Case 18: Cash-Rid. Acqg. Company

Information

- Allunter-based every company
- Cash rich
- Looking for good investment

Hypothesis: Return of financial makes sense.

Objective

- Assess ROE on acquisitions
- Consolidate small service companies that have better & costing systems other companies a backbone.

→?

Framework: Invest / Don't invest.

| Financial | Non-Financial |
|-----------|---------------|
| Synergies | Office |

Questions
What type of acqg. company?

Financial

- Projected Cash Flows with sensitivity analysis.
- Capital structure (Debt/Equity)
- Purpose: Buy & Integrate, Buy & Hold then sell, Buy & Protect
- Financial Synergies. (Service own fee-series)
- Return on investment
- Assets / Liabilities (What is acquired)
- Growth
- Cost of Probability
- Price (+ Premium).

Non-Financial

- Culture (Aligns with overall strategy)
- Expertise (Access to technical / subject matter experts)
- Board (Suitable to acquire (Own vs Next Co.))
- Capabilities (Sense adding capability to integrate services into product mix).
Do they

Synergy Creation

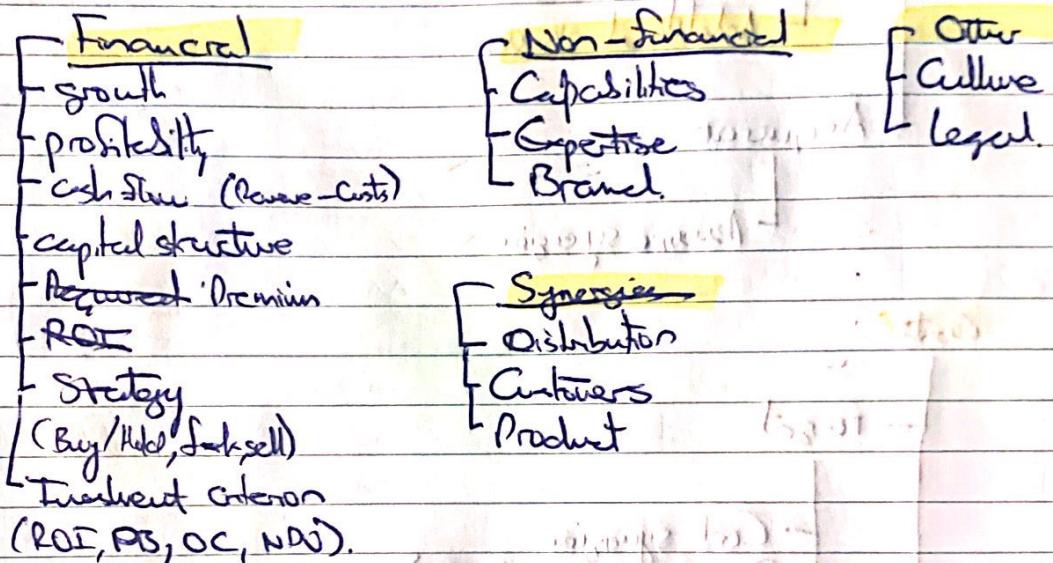
- Distributor demands few services offered (costing products).
- Customers (Target, different point of value chain)
(as they produce/generate & acquire for serving).
- Product (Adapt services to add ons)

Other

Culture (will integrate e.g. Facebook vs Instagram).

Legal (Commerce commission allow Goods & BHPUs acc.).

Framework



Progression

After considering factors, assess Revenue & Cost of the servicing company.

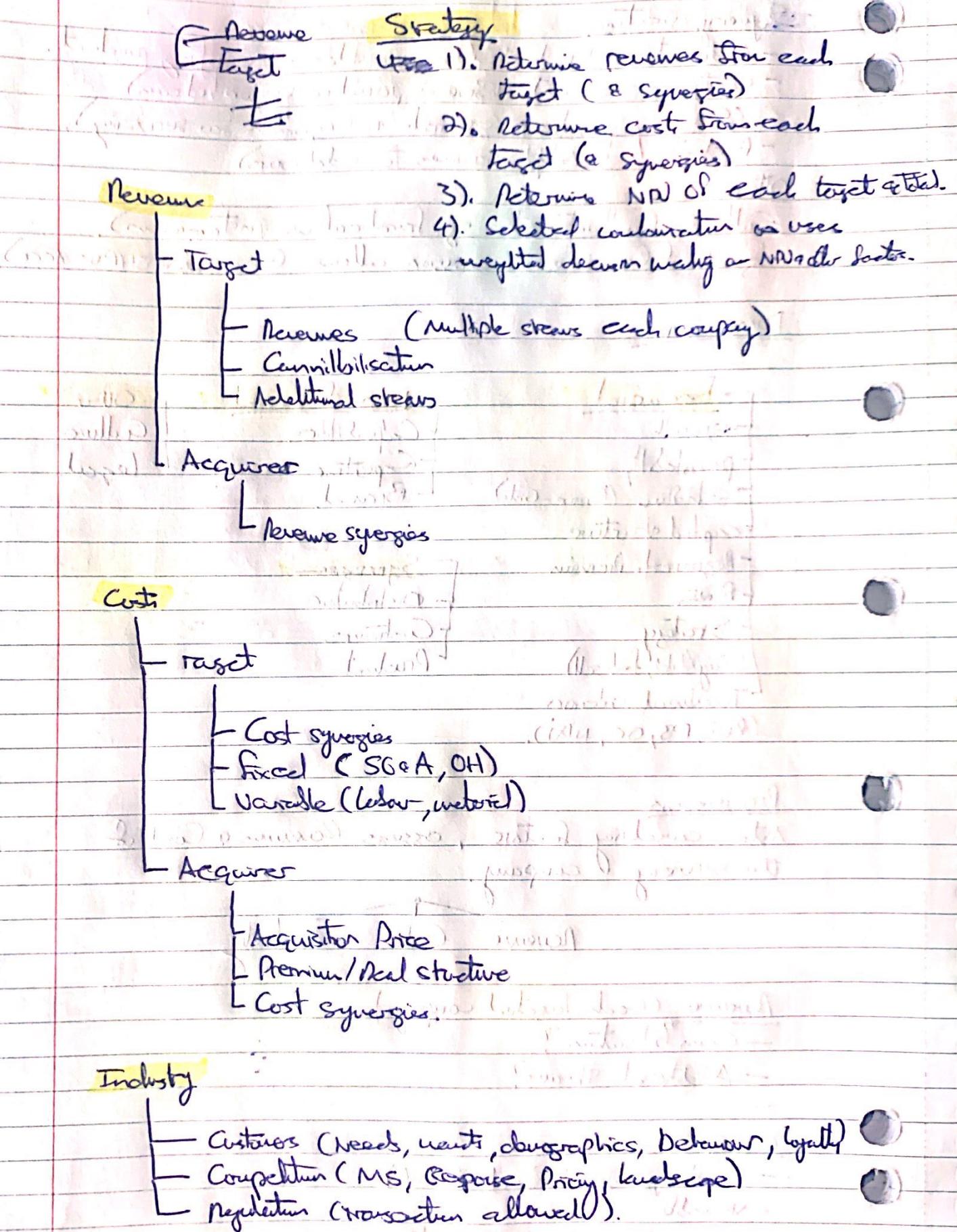


Revenue (Each target company)

- Capitalisation?
- Additional streams?
-

Costs

- Cost synergies (fixed, SG&A)
- variable
- Acquisition cost, deal structure
(\uparrow / \downarrow in costs)



WORKINGS / INFORMATION

Revenues

- 10M / year.

Number of targets

(500) - Assume achieve them all).

Cost reduction (All targets)

[S% decrease in equipment]

[S% decrease labour]

1% decrease SG & A

Structure

Cost reduction / Company

[SM labour]

[2.5M Equipment]

[2M SG & A]

↳ (50% of Revenue for Labour)

↳ (25% of Revenue for Equipment)

↳ (20% of Revenue for SG & A)

Profit growth 3% / year

Discount rate 13%

→ High Capital intensive

Assumption: Use annuity $\frac{1}{(1+r)^t}$ on profit for NPV

(Revenue - Cost)

Discounted Profit

WORKINGS

1). Revenue / year

10M

2). Cost structure / company $\times (1 - \text{reduction})$

[SM $\times 0.9S$ Labour]

(4.75M)

S $\times 9S$

450

2S

4.75

Equipment

2.5M $\times 0.9S$

2.25M $\times 9S$

18

4.5

225

$$\begin{array}{r}
 2.5 \times 0.95 \\
 25 \times 95 \\
 \hline
 5 \\
 180 \\
 \hline
 205 \\
 25 \\
 100 \\
 \hline
 185
 \end{array}$$

$$\begin{array}{r}
 2750 \\
 725 \\
 \hline
 2425
 \end{array}$$

$$\begin{array}{r}
 25 \times 95 \\
 \hline
 180 \\
 45 \\
 \hline
 225 \\
 100 \\
 \hline
 225
 \end{array}$$

$$\begin{array}{r}
 225 \\
 125 \\
 \hline
 2375
 \end{array}$$

~~2.56 & A~~

$$25 \times 0.96$$

$$2 \times 94$$

$$180$$

$$28$$

$$188$$

$$1.88 \text{ m}$$

$$2.5 \times 95$$

$$225$$

$$100$$

$$225$$

$$1.88 \text{ m}$$

| Category | Revenue / year | Costs / year | Profit |
|-----------|----------------|--------------|---------|
| Revenue | 10.00 | 2.56 | 7.44 |
| Labor | | 4.750 | |
| Equipment | | 2.375 | |
| \$6 & A | | 1.880 | |
| Total | 10 | 9.00 | 0.87 M |
| | | 8.905 | Profit |
| | | | 0.095 M |

$$\begin{array}{r}
 \text{Profit} \\
 10.000 \\
 - 8.905 \\
 \hline
 1.095 \text{ M}
 \end{array}$$

Apply annuity to formula

3). NPV / Company

$$\frac{1.095}{(0.13 - 0.03)} = 1.095 = 10.95 \text{ M / company}$$

$$\begin{array}{r}
 \text{NPV (Total)} \\
 10.95 \times 500 \text{ company}
 \end{array}$$

$$\begin{array}{r}
 10.95 \times 5 \\
 = 54.75 \\
 - 25 \\
 = 4.50 \\
 - 0 \\
 = 50.00 \\
 \hline
 \underline{54.75}
 \end{array}$$

$$\begin{array}{r}
 54.75 \times 100 \\
 = 5475 \\
 \approx 5475
 \end{array}$$

Recommendation: Acquisition primarily based on deal value. NW of acquiring 500 target companies is \$ 5475 B. If the assets can be bought at a discount, the ROI will increase. A sensitivity analysis should be conducted before evaluating a purchase decision. (Revenues, Cost & growth). → Consider other investments. → ROI & NW.

Risks

- Aggregate assumption concerning as companies will not perform equally.
- Not assessed competitive landscape or regulatory environment.
- Discount rate will change with capital structure & not remain constant.
- Projection assumptions have not been verified / validated.

Next step: Verify profit projections & assess risks above before proceeding into negotiations.