World 3 Firm 2

End of Year 3, Strategies for the Future

Agenda

- Executive Summary
- Marketing Strategy
- Operations Strategy
- Finance Strategy
- Compensation Plan

1.

Executive Summary

We won the highest score for the marketing plan.

Firm 1: 1.1

Firm 2: 1.15

Firm 3: 1.09

Firm 4: 1.08

World 1 Firm 3 bought World 3 Firm 5 in period 70.

Product 1 Target Markets:

Planned targets	Actual targets
U.S.	**U.S.**
U.K.	**U.K.**
Germany	**Germany**
Japan	Japan - less successful

Moving Forward: We will mainly focus on the U.S., U.K., and Germany.

Product 1 Marketing: Strategy focused on high quality, high green value

Plan	Actual
Lower investment in quality to increase investment in green value	Increase investment in both quality and green value
Maintain competitive price	Maintain competitive price - higher than firms 1 & 4, lower than firms 3 & 5

Moving Forward: Our strategy is very successful so we do not plan to change it.

Product 1 Operations Goal: Lower inventory to between 10% & 25% demand

Starting Inventory Y3

28.83% of demand ($2 holding cost)

Ending Inventory Y3

36% of demand ($2 holding cost)

Moving Forward: Continue 100% factory capacity and maintain competitive price so that demand is high.

Product 1 Competitors - red indicates firm has the most extreme of that value.

	Price (low)	Brand	Quality (high)	Green (high)
Firm 1	X	X		X?
Firm 2	X	X	X	X
Firm 3			X	
Firm 4	X			
Firm 5		X	X	X?

Firm 2 led the product 1 market for the 2nd and 4th period, but firm 1 is close behind with about 6% fewer unit sales.

Product 2 Target Markets:

Planned targets

U.S.

U.K.

Germany

Japan

Actual targets

U.S. - less successful

U.K.

Germany

Japan - less successful

Moving Forward: Main focus on U.K., but also focus on U.S. and Germany

Product 2 Marketing: Strategy focused on high quality, high green, high price

Plan

High quality, high green value, and keep price relative to most firms

Actual

High quality, high green value, high price (to control demand)

Moving Forward: Continue strategy of high value, but more competitive price

Product 2 Operations Goal: Lower inventory to between 10% & 25% demand

Starting Inventory Y3

34% of demand

Ending Inventory Y3

10% (inventory purchased)

Moving Forward: Expand factory capacity slightly

Product 2 Competitors- red indicates firm has the most extreme of that value.

	Price (low)	Brand	Quality (high)	Green (high)
Firm 1	X			
Firm 2		X	X	X
Firm 3		X	X	
Firm 4	X	X	X	X
Firm 5	X	X		

Firm 4 led the product 2 market for 2 periods, but firms 3 & 5 improved unit sales the most in period 72.

Finance

Starting Values Y3

Debt/Equity: .69

Goal: .80

Net income: $3.35M

Goal: 10% growth

Ending Values Y3

Debt/Equity: .81

Net income: $2.84M

$46,313,269

Sales - 1st in World 3

2,838,542

Net Income - 2nd in World 3

100%

Total success!

Goals for the future

Product 1 - relative high value, affordable price

Product 2- high value product (ex: Apple product)

Operations - Avoid stockout, maintain low inventory, expand

Finance - Go public, maximize shareholders' value

Decisions to be made

- Market strategies
  - Product 1
  - Product 2
- Proposal to go public
- Compensation

2.

Marketing

Product 1

Product 1 Discussion

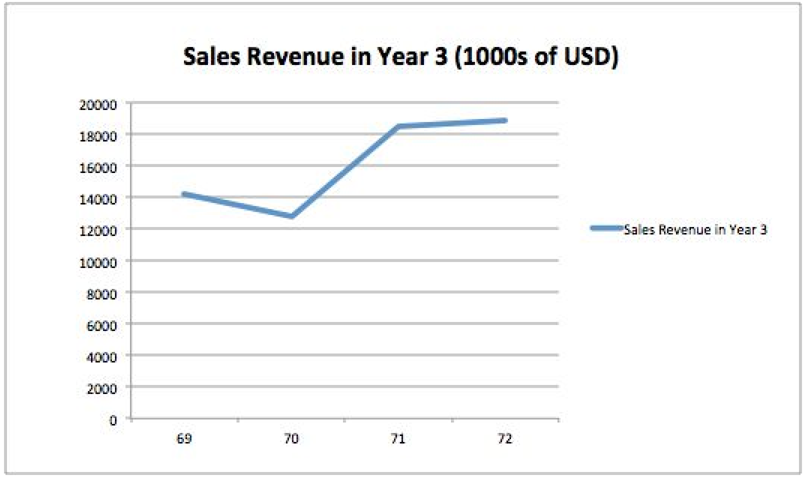
- Year 3 Market Analysis
- Competitive Analysis
- Pricing Recap
- Marketing Expenses Recap
- Environmental Recap
- R&D Recap
- Summary and Sustainability

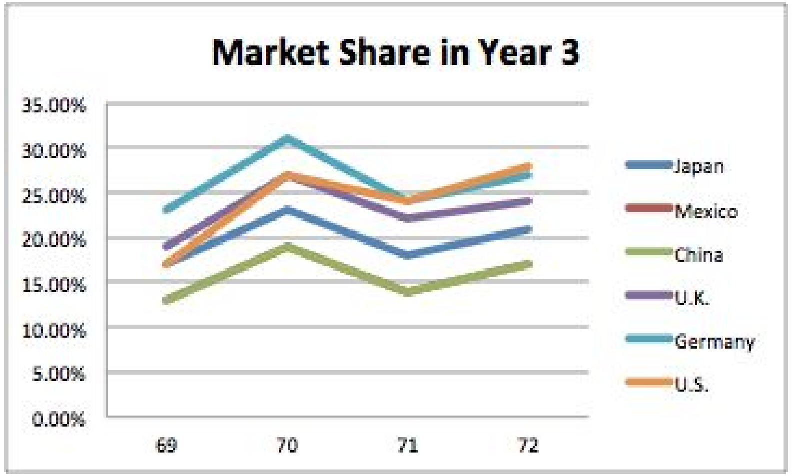
What the Product 1 Consumer Values

1. **Price** (coefficient: .29)
2. **Quality** (coefficient: .22)
3. **Green** (coefficient: .20)

P1 Year 3 Market Analysis

- Highest unit sales, exceeding the 2nd place by 7%
- Average market share is 103.75%, lower than 104.38% in previous year.
- 20% increase in Sales revenue.





P1 Year 3 Market Strategy

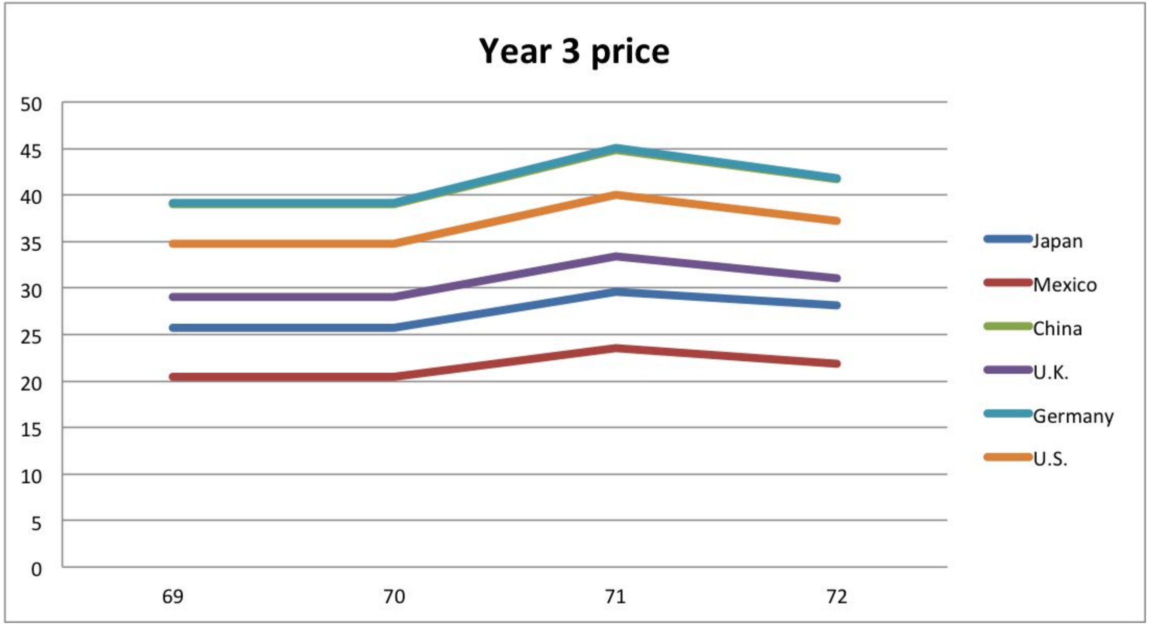
- R&D: Increased by 50% at the beginning of the year. Kept it the same throughout Year 3. (3rd place at the end of the year)

- Green: Increased by 83% in the beginning and kept it the same throughout. (74.57/64.84)

- Market:Increased by 50% to benefit from Marketing multiple.

P1 Year 3 Price

- Generally an increasing trend.(2nd place at the end of the year)



P1 Competitive Analysis

Sales Revenue (millions of USD)

	69	70	71	72
Company 1	$13.5	$17.4	$16.9	$16.3
Company 2	$12.8	$20.5	$23.4	$26.7
Company 3	$19.4	$19.6	$21.5	$22.1
Company 4	$18.2	$20.2	$23.8	$21.3
Company 5	$16.8	$18.3	$18.2	$17.4

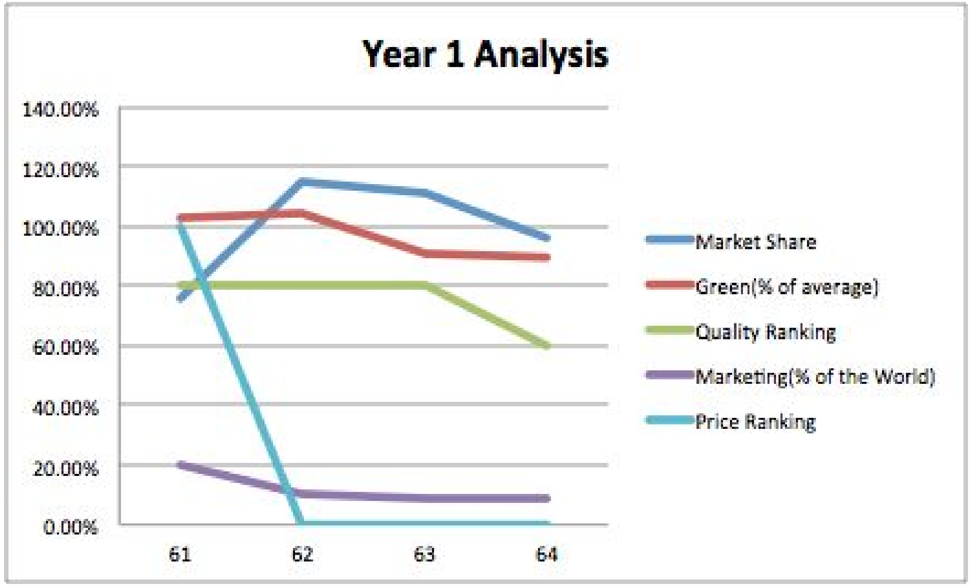
Competitive Analysis

- Company 3-High price, High quality Ranking
- Company 4-Low price, Low quality Ranking

	Sales Volume	Sales Revenue $(000)
Company 1	5,146	158,155
Company 2	4,873	154,250
Company 3	4,425	153,806
Company 4	4,818	162,457
Company 5	4,317	154,041

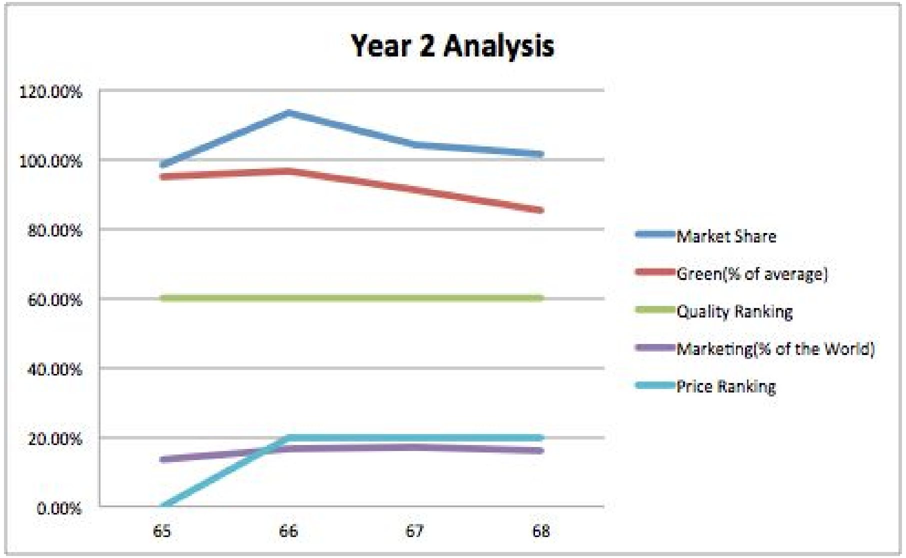
Year 1 Analysis

- Low price low quality strategy.
- Decreased price by 20% in period 62.
- Market share increased due to the low price but then suffered from the low green value and quality.



Year 2 Analysis

- Low price low expense.
- Raise price by a little to stay profitable.
- Little change in market share.



Future Plan-Good product with affordable price

- Average price-regression show customer most responsive to price. We want to keep our price incentives.
- Provide satisfying quality.
- Using environmental value as our niche.
- Invest heavily in marketing to create brand image and customer stickiness.

- “A watch that can be worn for a lifetime”
- Price: $100-$300
- Watch runs using light as the only power source.

Product 1 Questions?

2.

Marketing

Product 2

Product 2 Discussion

- Year 3 Market Analysis
- Competitive Analysis
- Pricing Recap
- Marketing Expenses Recap
- Environmental Recap
- R&D Recap
- Summary and Sustainability

What the Product 2 consumer values

1. **Green** (coefficient: .20)
2. **Quality** (coefficient: .16)
3. **Brand** (coefficient: .03)

P2 Year 3 Market Strategy Overview

- Highest Quality in market
- Well above average green value
- Highest prices in the market

Expectation:

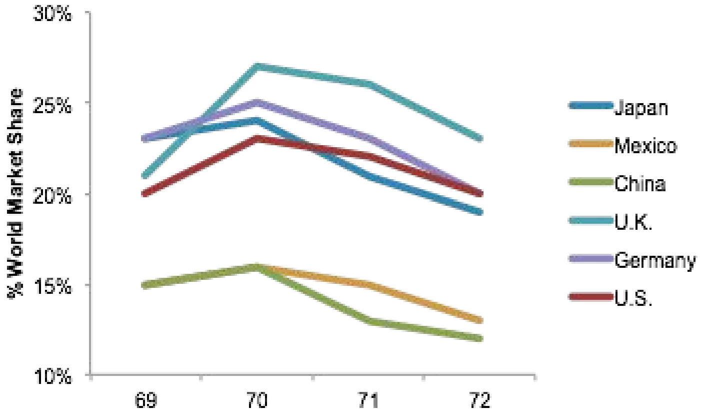
Best product. High prices. Low volume.

P2 Year 3 Market Share

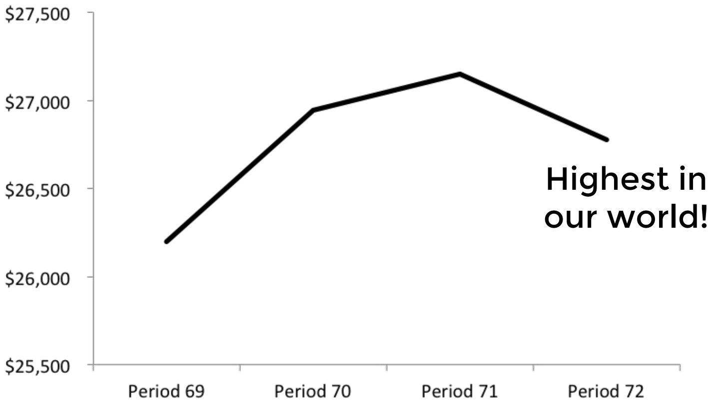
Decreasing market share with overall increase in sales (except period 72).

U.K., Germany, U.S., and Japan remain top market players.

Year 3 Market Share



Year 3 Sales Revenue (in 1000s of USD)



P2 Competitive Analysis

Year 3 P2 Unit Sales by Company (in 1000s)

	69	70	71	72
Company 1	401	360	369	382
Company 2	402	413	389	378
Company 3	337	318	287	324
Company 4	402	410	443	429
Company 5	365	368	352	390

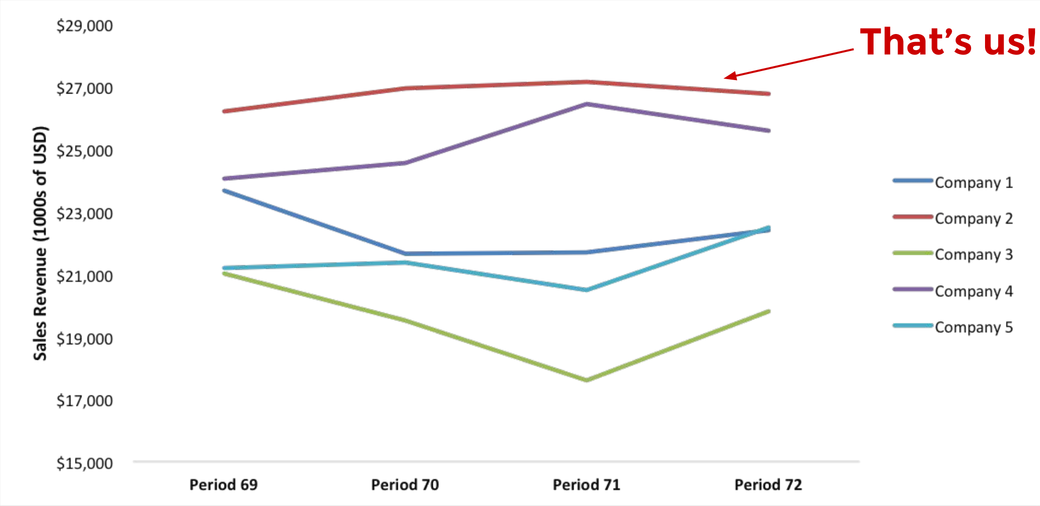
Company 2 Strategy
Highest Quality
Highest Price
High Sales
Above Avg. Green Value
Marketing Multiplier = 1.15

Company 3 Strategy
High Quality
High Price
Low Sales

Company 4 Strategy
Medium Quality
Medium - High Price
High Sales
Marketing Multiplier = 1.08

Competitor Analysis - Company 2 had highest $$$

Year 3 P2 Sales Revenue in 1000s of USD



Company 1 (MA 1.1)

- Low Price
- Low Quality
- Medium Green

Company 2 - (MA 1.15)

- High Price
- High Quality
- High Green

Company 3 (MA 1.09)

- High Price
- High Quality
- Low Green

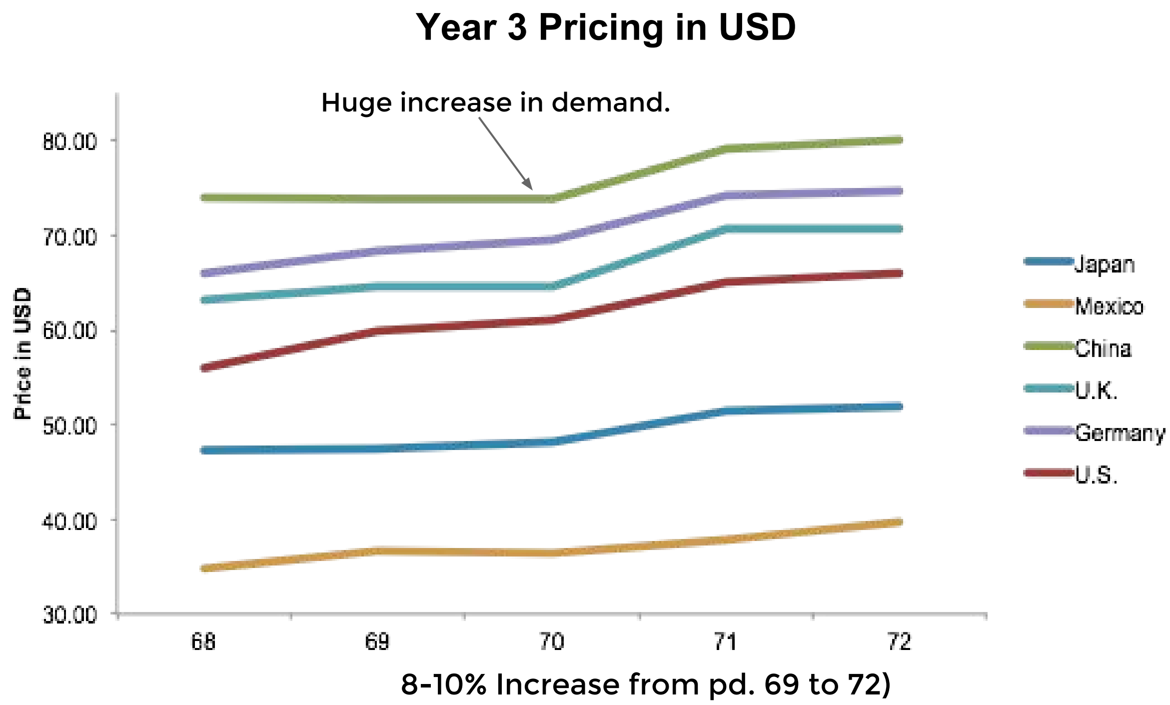
Company 4 (MA 1.08)

- Low Price
- High Quality
- High Green

Company 5

- Low Price
- Low Quality
- High Green

P2 Pricing - Increase prices in Year 3

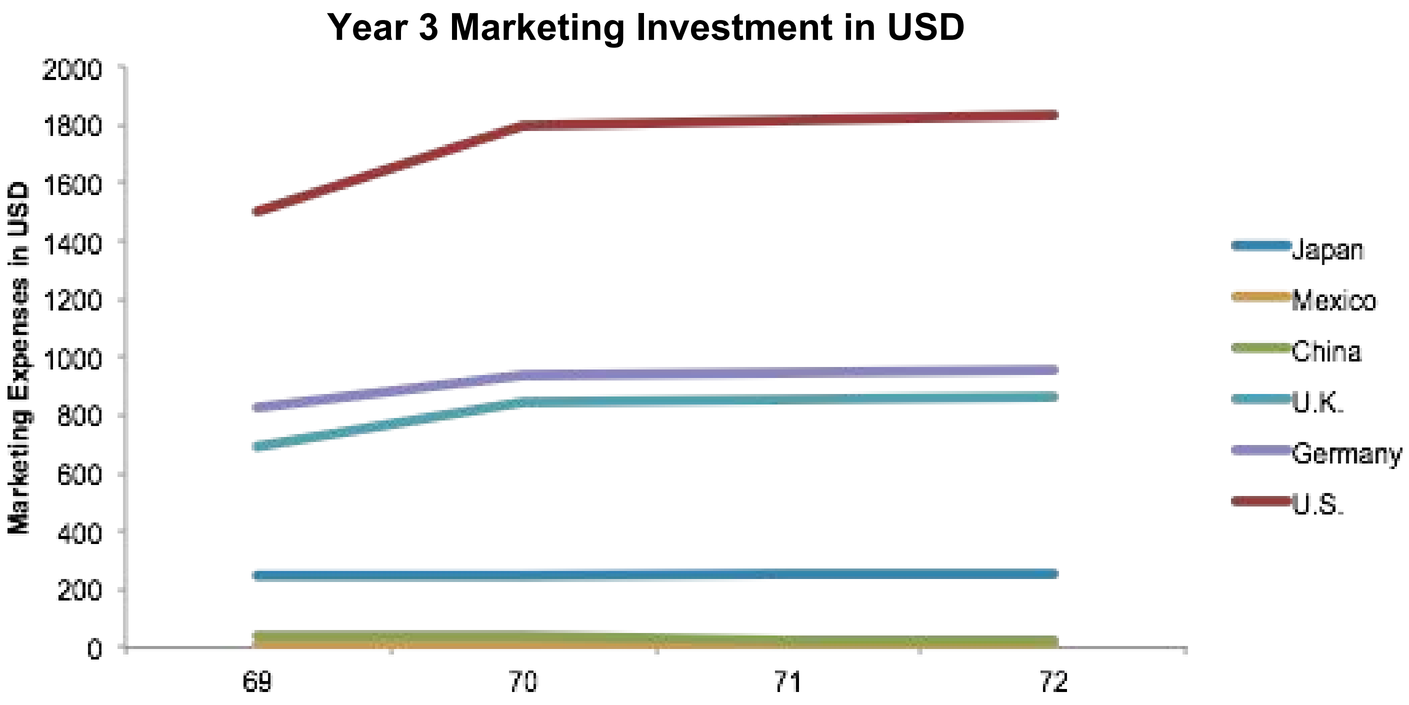


Company 3 also had a high price strategy.

Additional increase in 72 led to lower performance

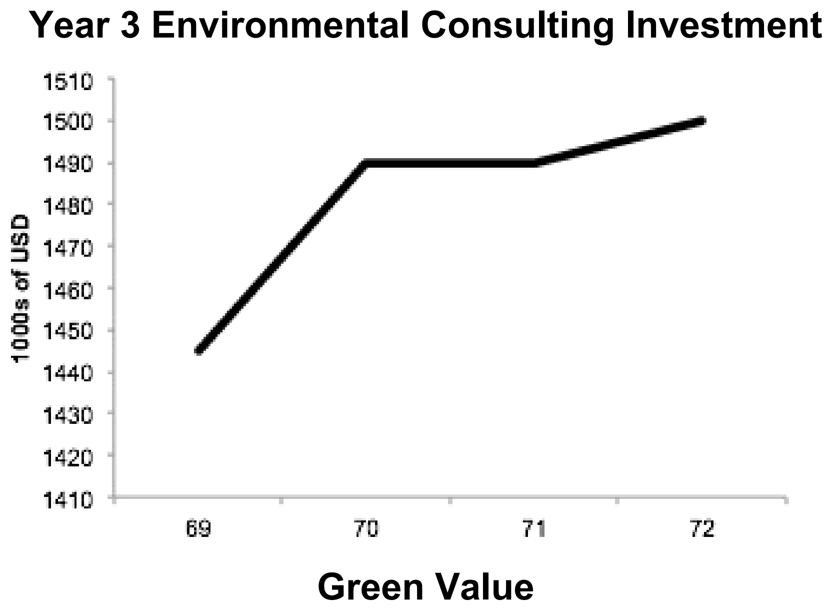
P2 Marketing Expenses -

Capitalized on 1.15 multiplier advantage, Invested heavily in U.S., Germany, and U.K.



Heavy investment in marketing kept our sales from dropping too low with an increase in prices.

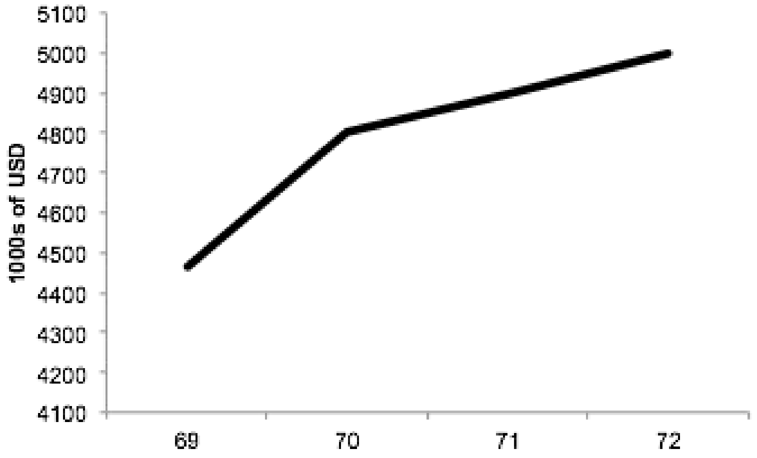
P2 Environmental Consulting
Invest to maintain above average green value



Company 2	73.33%	72.57%	71.77%	71.19%
World Average	66.51%	64.30%	62.42%	61.91%

P2 R&D - Invest to have the highest quality

Year 3 R&D Investment



Relative Quality

	69	70	71	72
Company 1	96.7	96.7	97.8	98.4
Company 2	103.7	105.8	106.5	106.6
Company 3	107.5	104.2	103.4	105.1
Company 4	101.7	102.5	102.1	101.1
Company 5	90.4	90.9	90.2	88.9

The Future – Be the best product.

- Have the highest prices, but not as high as period 72.
  - Find the optimal price between period 70 and 71.
- Maintain the highest quality.
  - Steadily spend on quality to stay at the top, but allocate more to other factors.
- Invest heavily in a high green value.
  - Predicted for the high sales in Company 4.
  - Current spend is $1.5m, increase to >$2m.
- Maintain heavy marketing expenditure to build brand.
  - Use the marketing multiplier advantage.

Product 2 Brand Analogy

Product 2 aims to be the best product in its market. With high brand, quality, and green investment, it is able to create demand by meeting its consumer's needs.

A great example of this is Apple - selling high quality products at high prices and still maintaining demand through a strong brand image and innovation.

High quality materials from Japan:

Sapphire Crystal Embellishments
Quartz Accuracy
Japanese Rosewood Dials
High-grade Titanium

Consumers want the best products in the market and are willing to pay high prices for them.

Product 2 Questions?

3.

Operations

Operations Discussion

- Recap of strategy before Year 3
- Value of Factory Move
- Competitor Analysis
- Specifics
  - Quantity Produced vs. Demanded & Inventory Levels
  - Production Consulting Spending
- Future Goals

Operations--Recap of Strategy before Year 3

- Continue to monitor factory relocation value
  - Calculate NPV at end of Year 3
- Focus on Variable Cost and Total Cost to increase our Net Income and lower Operational Costs
  - Ensure utilization levels closer to 100% to minimize operational costs
    - based on sales forecast demand and total capacity of factories
  - Maintain inventory level between 10% to 25% of demand for Product 1 & 2
  - Balanced Production Consulting Spending

Operations--Value of Factory Move

- Year 3 NPV value: ~$27.1 Million ($2.1 million decrease from Year 2 but still $1.3 Million greater than Year 1)
  - input values were averages of all periods of Year 3
- Part of relocation decision was for higher quality
  - saw huge success with Product 2

% SPENDING of Total Revenue (on average)	R&D	Difference (from Year 3)	COGS	Difference (from year 3)
Year 3 Total	15.52%	0.55%	40.90%	5.42%
Product 1	4.67%	1.25%	18.88%	1.62%
Product 2	10.85%	1.80%	22.02%	3.80%

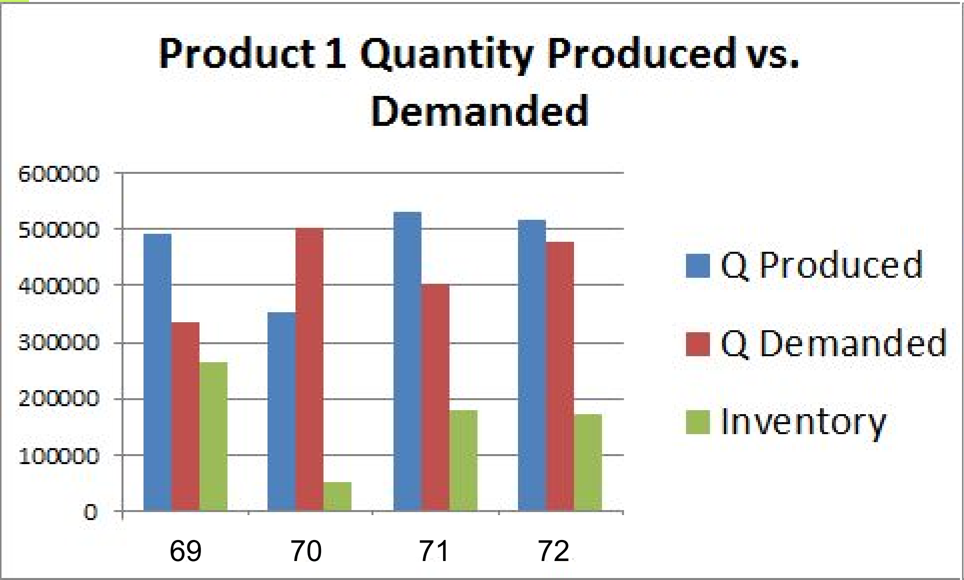
Operations--Competitor Analysis

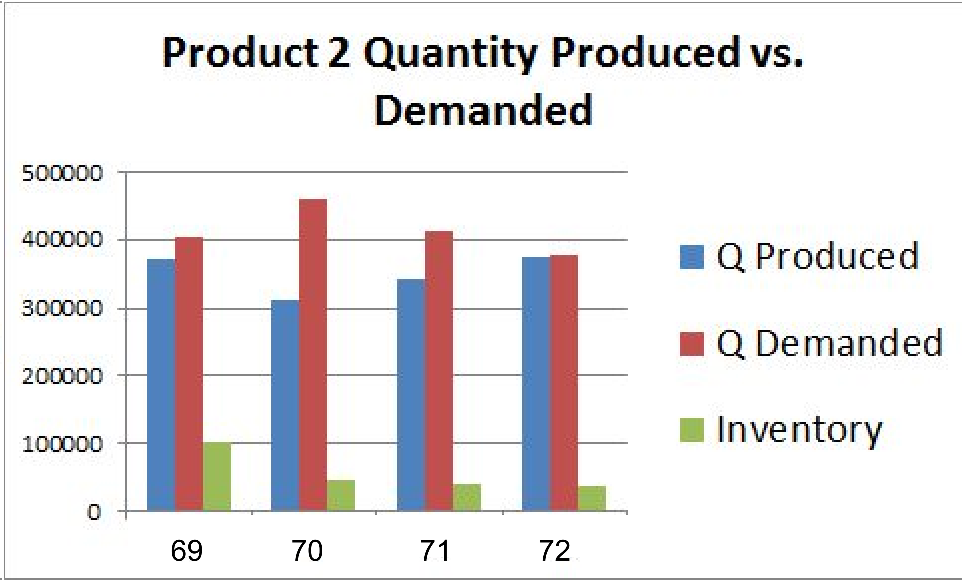
- No factory relocation by anyone
- Highest Factory Capacity the entire year
- Inventory Levels:
  - Product 1: Highest to Higher End
  - Product 2: Highest to Lowest
- Won contracts in Periods 70 & 72

Operations--Quantity Produced vs. Demanded & Inventory Levels

Product 2 Focus

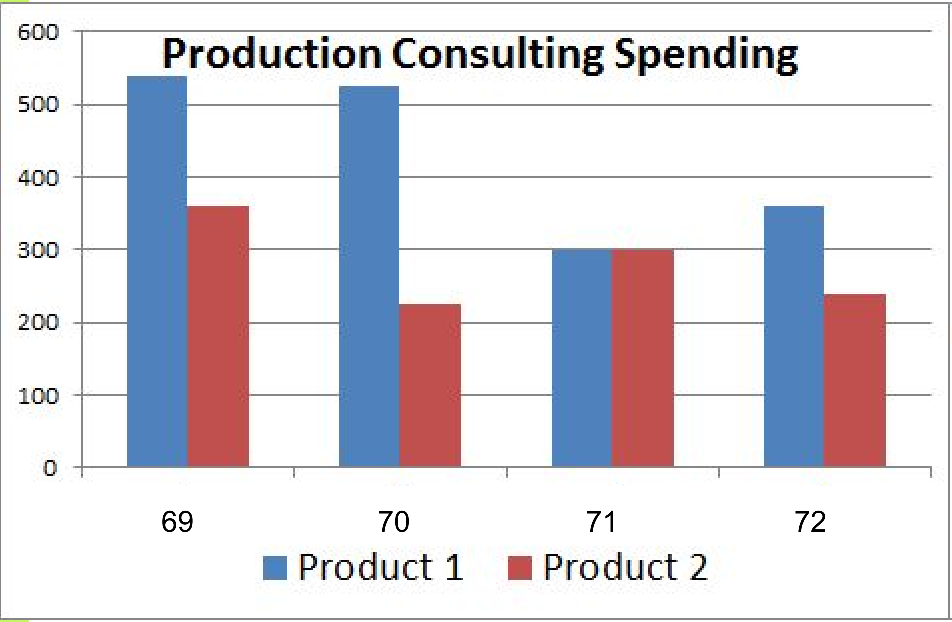
- Best inventory levels
- Stockout in Periods 70 & 71

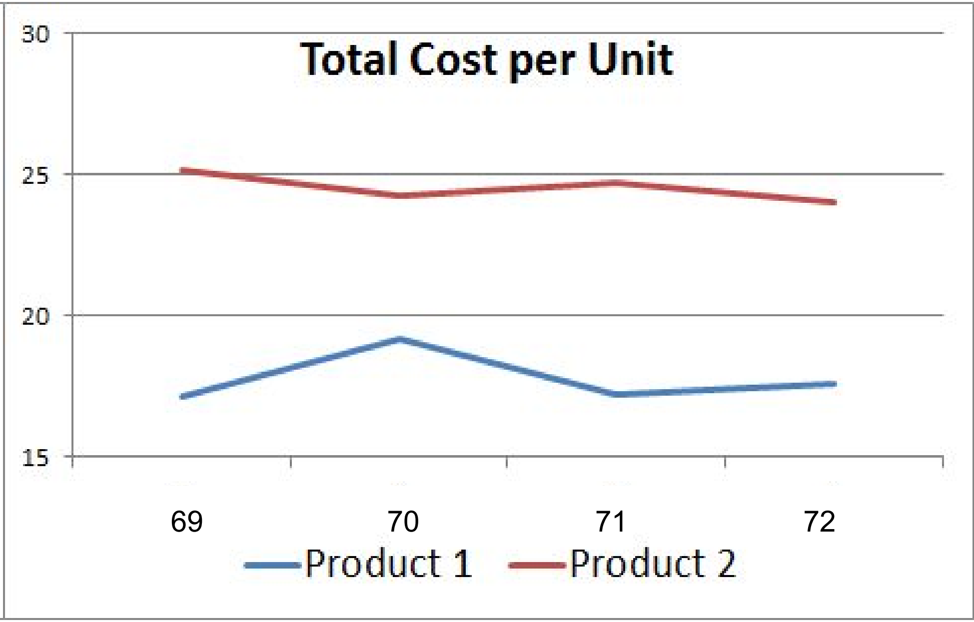




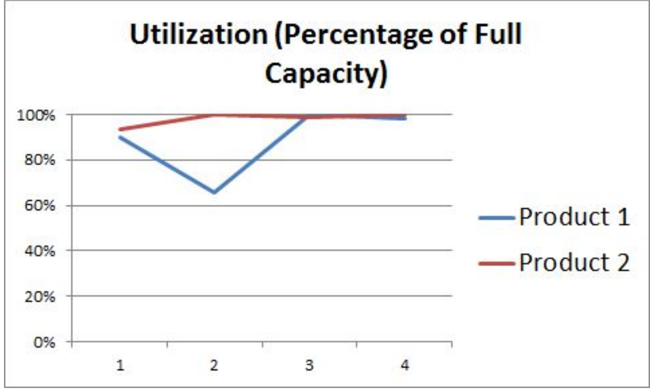
Operations--Production Consulting Spending consistently focused on Product 1

- Product 1 TC fluctuation due to sudden success in Period 70





Operations Future Goals



- Continue to:
  - monitor factory relocation value via NPV calculations
  - ensure utilization levels closer to 100% to minimize operational costs
  - maintain inventory level between 10 to 25% of demand for both products ($1/unit holding cost)
  - balanced production consulting spending
- Expand unit capacity of both factories
  - avoid stockout situations
  - avoid inventory purchasing

Operations Questions?

4.

Finance

Recap of Year 3 | Overview

Recap

- Focus on product development
  - Sales/Market Share

- Difficulty in reconciling operation strategies to catch up surging demand
  - Too expensive

Overview

- Profit & competitor analysis
  - Profitability
  - Cost
  - Cash

- Review of past financial decisions
  - FX
  - Debt

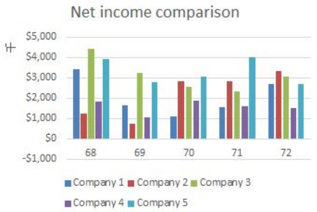
- Future Plan
  - IPO

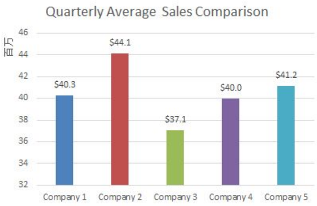
Competitor Analysis

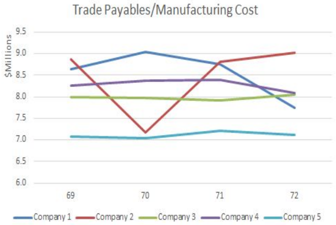
Ranking Table

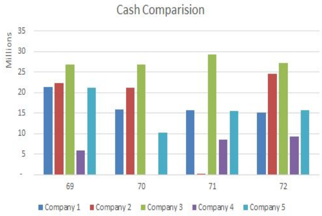
Main competitors

	Sales	NI	PM	Production Budget	Cash
Company 1	3	4	4	5	3
Company 2	1	3	3	4	2
Company 3	5	2	2	2	1
Company 4	4	5	5	3	5
Company 5	2	1	1	1	4









Analysis

- **Company 2** - Successful sales but ineffective operation management hurt our profits
- **Company 5** - Major source of NI is product 1 (followed a luxury strategy); high cost efficiency
  - Small Factories (13M vs avg 15.6M) <- huge operational savings
  - Customer stickiness for product 1 due to historical investments in green, quality and brand # Heavy investments upfront are more effective; harder to shake the market than to maintain current market positions
- **Company 3** - low sales but high NI
  - Cost efficiency
  - Alternative income sources: FX trading/contracts

FX Trading - Shift in management perspective

Period	Currency	Decision	Forward last period	Spot this period	Exposure ($M)	Gain/Loss ($M)
69	EURO	BUY	0.79	0.78	50	0.811
70	EURO	BUY	0.81	0.82	50	(0.753)
71	EURO	BUY	0.81	0.82	50	(0.753)
71	YUAN	SELL	6.10	6.30	50	0.260
Net						**(0.435)**

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Speculator Mentality

FX Trading - Shift in management perspective

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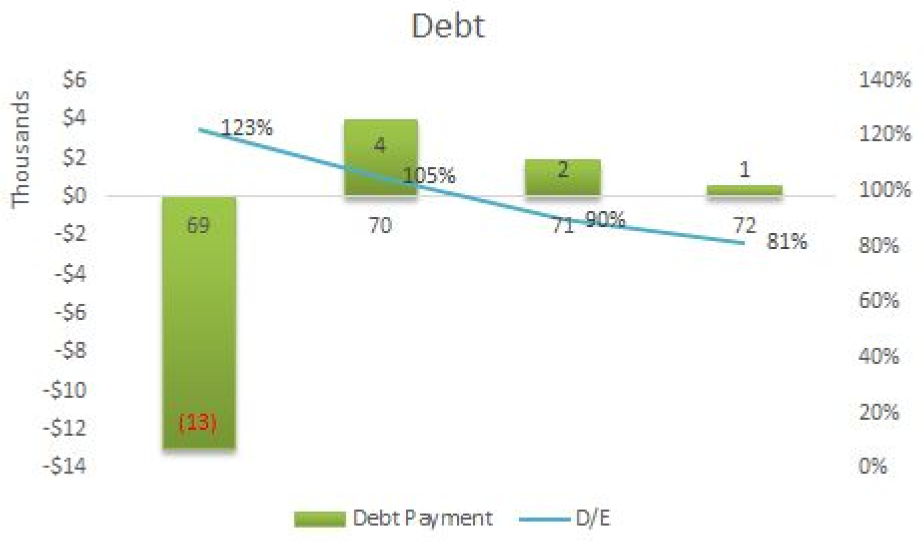
Speculator Mentality → Focus on core business

Debt Review



- Debt as the major financing source
- Levered up in Period 69 to support marketing expansion
- Smooth debt pay-down to reach optimal level at D/E=0.8

Now that we have a strategy that works, we are aiming for **bigger goals**

Strategic Focus: Product Development

Strategic Focus: Product Development

Fundings! (RE & Debt & Cash)

Strategic Focus: Product Development

Fundings! (RE & Debt & Cash)

IPO on Public Market

Strategic Focus: Product Development

Fundings! (RE & Debt & Cash)

IPO on Public Market

More Financing Options Maximize Shareholder's Value

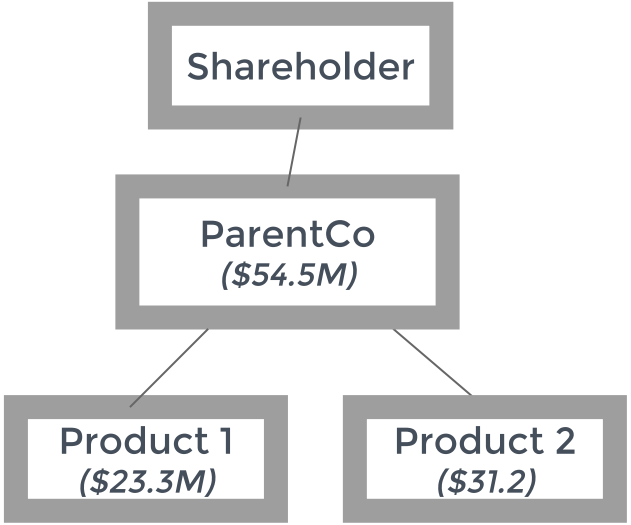
IPO Details

- $11M IPO
- Current Valuation at $54.5 M
- Increase valuation by Year 4 to $70M

Growth	Year 4	LT
Sales/Production	6%/4%	3%/2%
R&D	7%	3%
Green	5%	2%
Marketing	6%	2%
Factory Expansion	10%	15%

Alternatives for investors post IPO

Current State



Alternatives for investors post IPO

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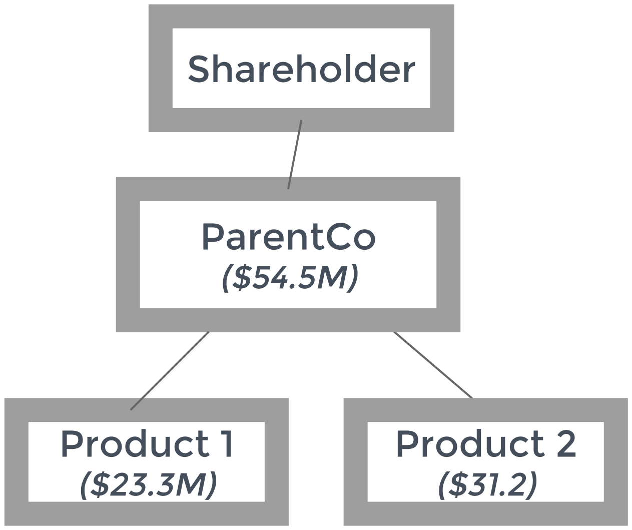

2 Entirely different product lines

- Different marketing strategies
- Separate operations with no potential synergies/joint-ventures

Alternatives for investors post IPO

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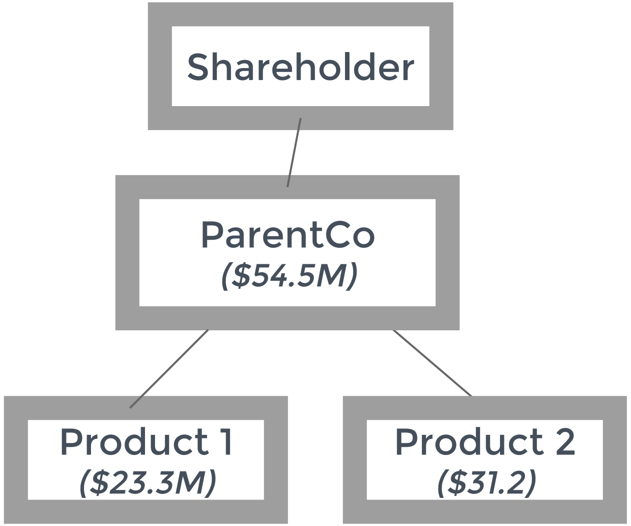

2 Entirely different product lines

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- Conflicts of interests
- Lack of shareholder clarity
- Bad performance of one product would hurt the overall stock performance and shareholder's value

Alternatives for investors post IPO

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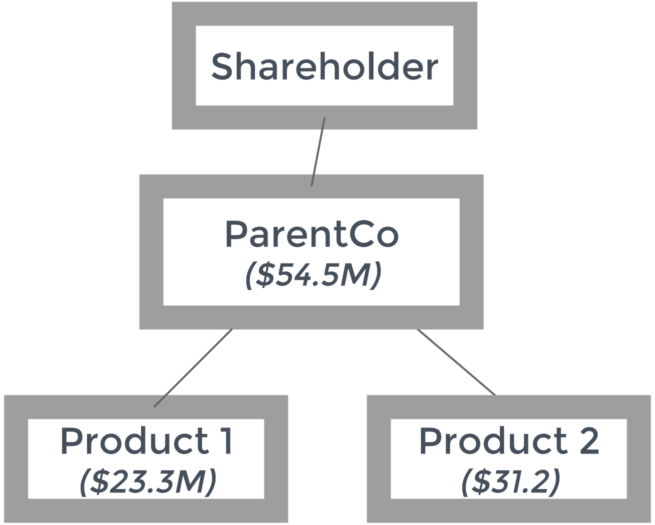

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- Lack of shareholder clarity
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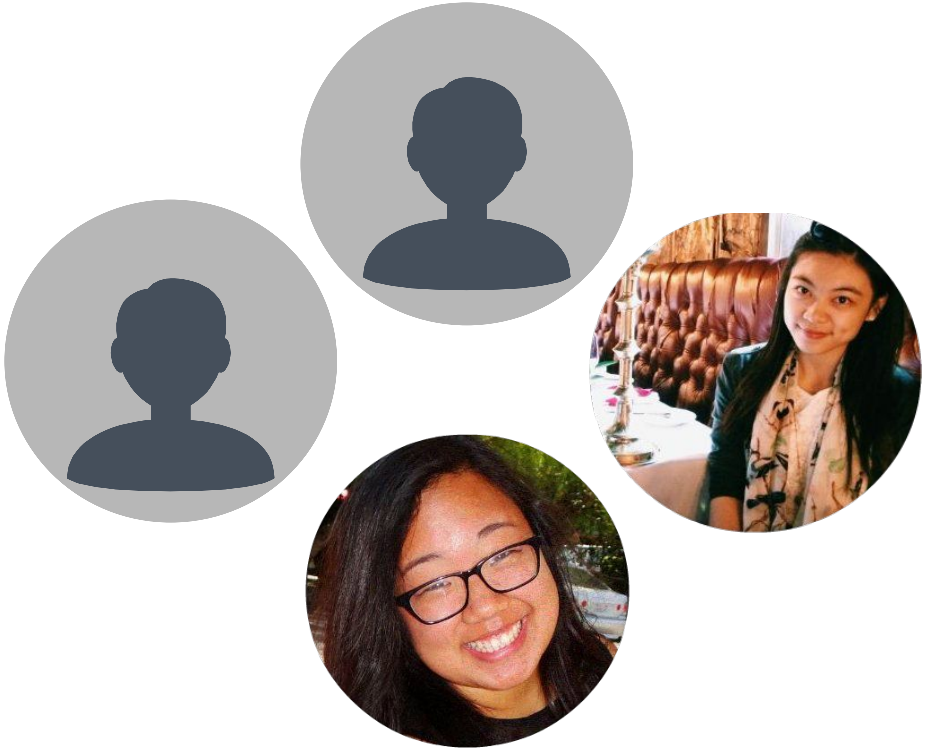
- Business separation
  - eg. equity carve-out/Spin-off product line that is less valuable

If the company splits, our management team will split up

PRODUCT 1



PRODUCT 2

Finance Questions?

5.

Summary

Goals for the future

Product 1 - relatively high value product, affordable price

Product 2- high value product (ex: Apple product)

Operations - Avoid stockout, maintain low inventory, expand

Finance - Go public, maximize shareholders' value

Decisions to be made

- Market strategies
  - Product 1
  - Product 2
- Proposal to go public
- Compensation

6.

Compensation Plan

	End of Period 68 or Average	Goal	Actual
ROIC (.25)	42%	26%	27.7%
Net Income Growth (.20)	145%	10%	-15.33%
Market Share (.20)	P1: 101.17%, P2: 96.70	P1: 105%, P2: 105%	P1: 112.46%, P2: 88.98%
Operating margin (. 20)	13.33%	12%	12.24%
Debt/Equity (.15)	.69	.80	.81

Bonus: Year 3 is a cash bonus only, capped at $100,000

ROIC (.25)			
Scale	>=24.0%	26.0%	>=30.0%
Bonus	50%	100%	150%

Net Income Growth (.20)			
Scale	>=5.0%	10.0%	>=20.0%
Bonus	50%	100%	150%

Bonus: Year 3 is a cash bonus only, capped at $100,000

Operating Margin (.20)			
Scale	>=10.0%	12.0%	>=15.0%
Bonus	50%	100%	150%

Debt/Equity (.15)			
Scale	.70<X<.90	.80	N/A
Bonus	50%	100%	150%

Bonus: Year 3 is a cash bonus only, capped at $100,000

Product 1 Market Share (.10)			
Scale	>=100%	105%	>=110%
Bonus	50%	100%	150%

Product 2 Market Share (.10)			
Scale	>=100%	105%	>=110%
Bonus	50%	100%	150%

Total Bonus

$75,000

Items for end of meeting

Evaluation URL: https://mg2k8.tepper.cmu.edu/game

Compensation

Y2: Full bonus $50,000, full raise 10%

Y3: Bonus $75,000, no raise

Appendix

Competitive Analysis

Total Net Income

	69	70	71	72
Company 2	**Lowest**	**Lowest**	**2nd**	**2nd**
Company 3	**Highest**	**Highest**	**3rd**	**3rd**
Company 5	**2nd**	**2nd**	**1st**	**1st**

Company 3 Strategy (Product 2)
High Quality
High Price
Lowest Sales

Marketing Multiplier = 1.09

Company 5 Strategy (Product 2)
Lowest Quality
Lowest Price
Lower Sales
High Green Value***

Company 2 Strategy (Product 2)
Highest Quality
Highest Price
High Sales
Above Avg. Green Value
Marketing Multiplier = 1.15