

CAKE.com DATA ANALYST HOME ASSIGNMENT

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Agenda

01 | KEY METRICS OVERVIEW

02 | DETAILED ANALYSIS

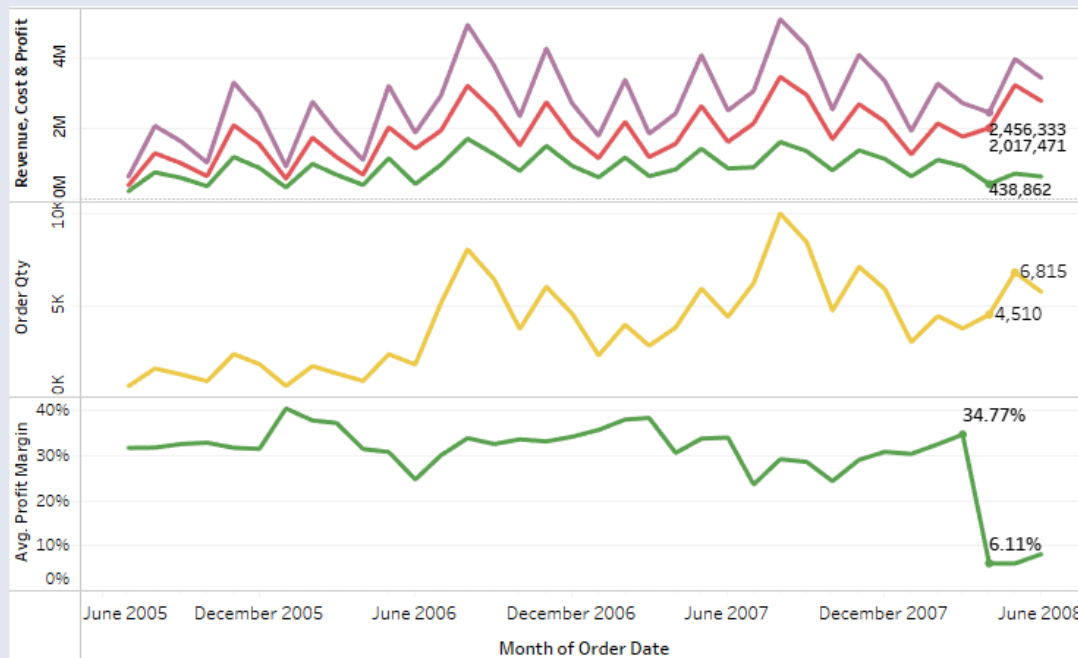
03 | INSIGHTS & RECOMMENDATIONS

Key Metrics Overview

Product Category	% of Total Cost	% of Total Profit	% of Total Revenue
Bikes	80.70%	88.63%	83.31%
Components	14.21%	14.05%	14.16%
Clothing	3.90%	-2.04%	1.95%
Accessories	1.19%	-0.64%	0.59%

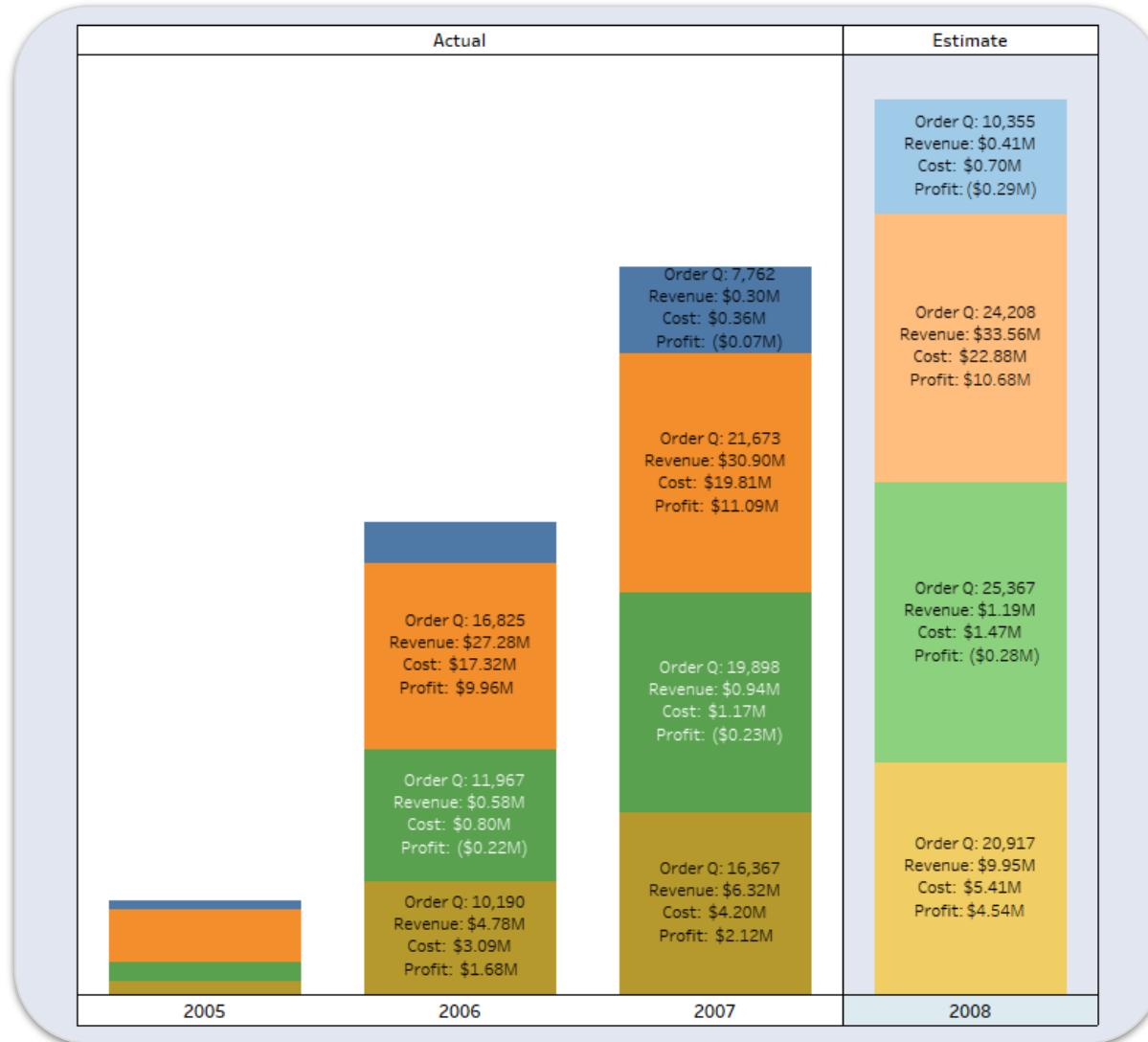
Product Category: (All) Product Sub Category: (All) Sales Region: (All)

Overall Trend



- Bikes represent the top-performing product category.
- At first glance, Clothing & Accessories account for losses within company's total profit.
- Q2 2008 marked significant decreases in terms of profit & profit margin.
- Nevertheless, order quantity followed previous seasonal trend.

Key Metrics Overview



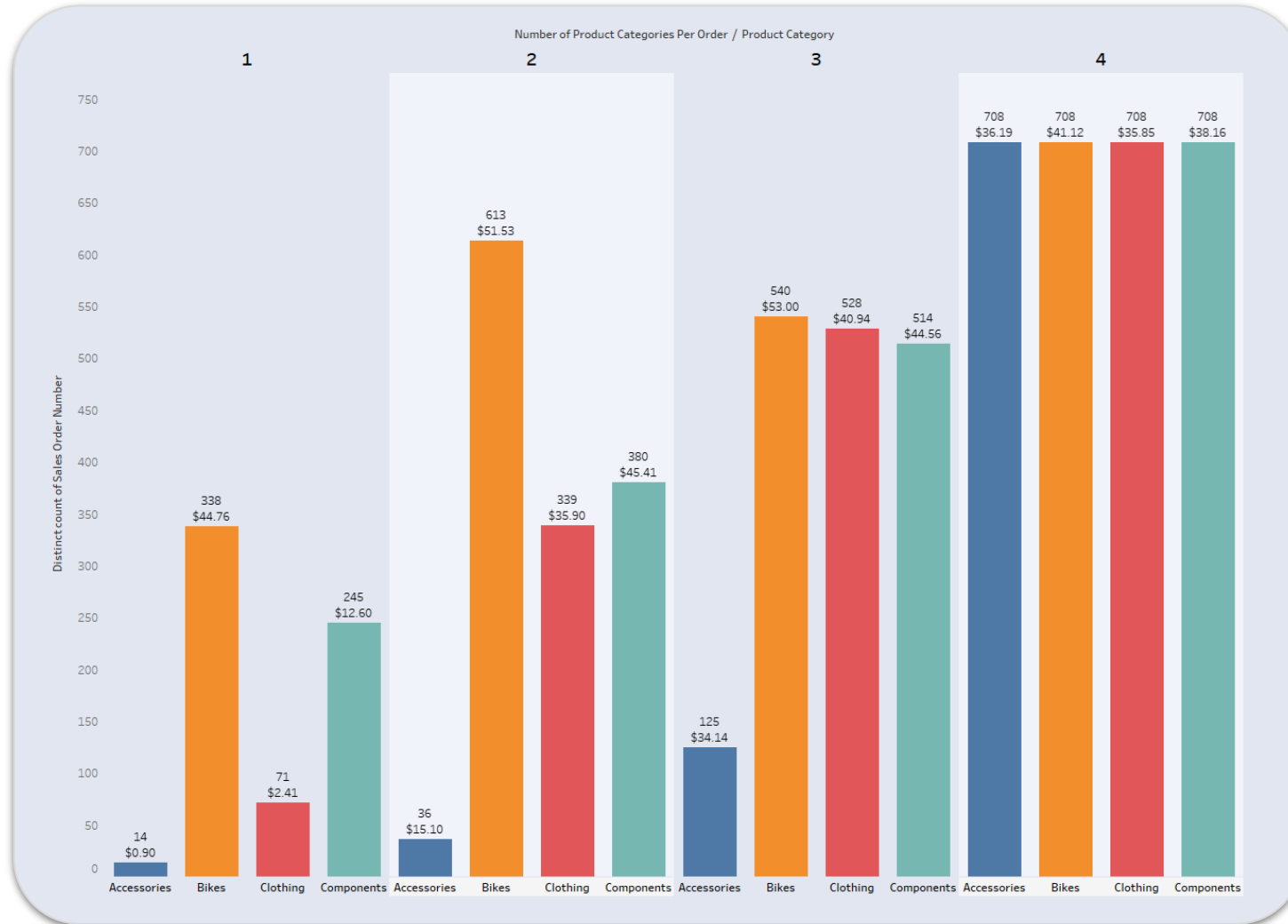
- Based on seasonal monthly trend throughout the years, forecast for 2008 was created.
- It is anticipated to receive more orders for each product category, whereas the total profit is projected to decline.
- Profit decline can be connected to previously displayed drop of profit margin.
- Repeatedly, Clothing and Accessories seem to always account for negative profits.

Detailed Analysis

Product Category	Profit Per Category	Product Sub Category	Profit	Profit w/o Freight Cost
Bikes	\$29,160,717	Mountain Bikes	\$14,090,164	\$15,153,139
		Road Bikes	\$12,262,938	\$13,664,110
		Touring Bikes	\$2,807,615	\$3,213,750
Components	\$4,623,548	Mountain Frames	\$2,263,981	\$2,638,163
		Road Frames	\$1,525,473	\$1,896,441
		Touring Frames	\$409,496	\$537,658
		Wheels	\$301,767	\$468,641
		Cranksets	\$87,763	\$114,574
		Forks	\$34,762	\$51,847
		Brakes	\$13,961	\$37,114
		Headsets	\$12,963	\$39,934
		Derailleurs	\$11,586	\$37,726
		Bottom Brackets	\$7,303	\$28,637
		Handlebars	\$1,621	\$114,387
		Chains (\$12,555)		\$5,506
		Pedals (\$12,874)		\$89,916
		Saddles (\$21,700)		\$30,665
Accessories	(\$211,353)	Bike Racks	\$64,032	\$114,083
		Hydration Packs	\$1,391	\$35,597
		Tires and Tubes (\$12,735)		\$558
		Locks (\$16,391)		\$10,806
		Pumps (\$19,677)		\$9,122
		Cleaners (\$38,626)		\$6,574
		Bottles and Cages (\$41,077)		\$4,360
		Helmets (\$148,270)		\$174,120
Clothing	(\$670,156)	Bib-Shorts	\$36,725	\$112,183
		Tights	\$27,974	\$138,991
		Shorts	\$23,719	\$234,432
		Vests	\$18,708	\$127,213
		Caps (\$139,431)		\$6,959
		Gloves (\$150,739)		\$141,830
		Socks (\$176,261)		\$20,258
		Jerseys (\$310,851)		\$118,729

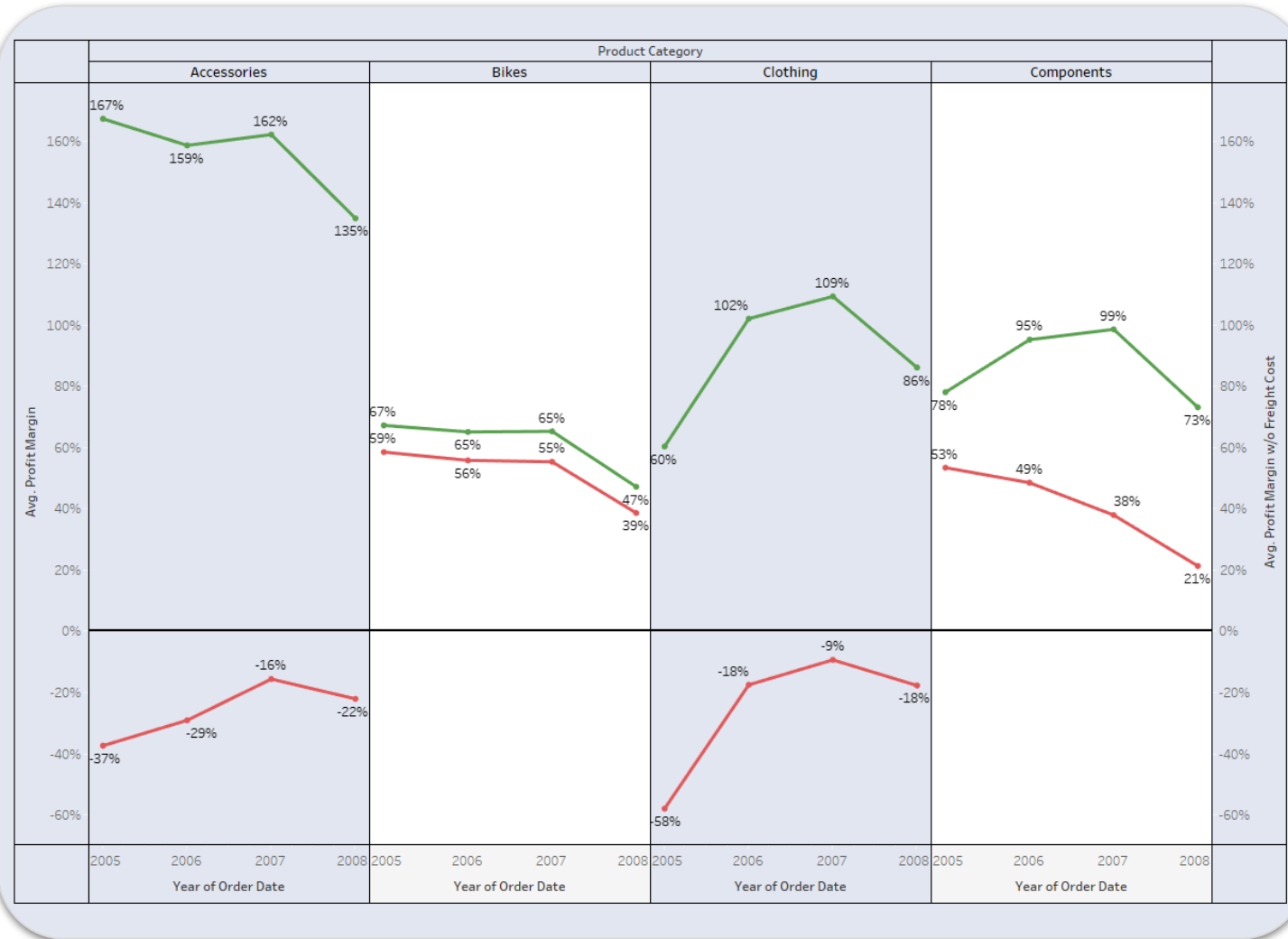
- Profit w/o Freight Cost highlights the difference between Unit Price and Unit Cost.
- In this scenario, Clothing and Accessories are displaying positive numbers.
- It can be concluded that due to average unit freight cost, these categories are always negative within total profit.

Detailed Analysis



- By further analysis, it's concluded that Clothing & Accessories are usually bought with other product groups such as Bikes.
- Due to higher total freight cost, unit freight cost per order is skewed.
- It can be concluded that these product groups are beneficial for the business and are not drivers of profit decline.

Detailed Analysis



- Clothing & Accessories are significantly impacted by high average unit freight costs, leading to negative totals.
- Average unit freight cost distribution within an order affects categories' measures, such as profit and profit margin.
- This method disadvantages Clothing & Accessories and obscures accurate reporting by product category.

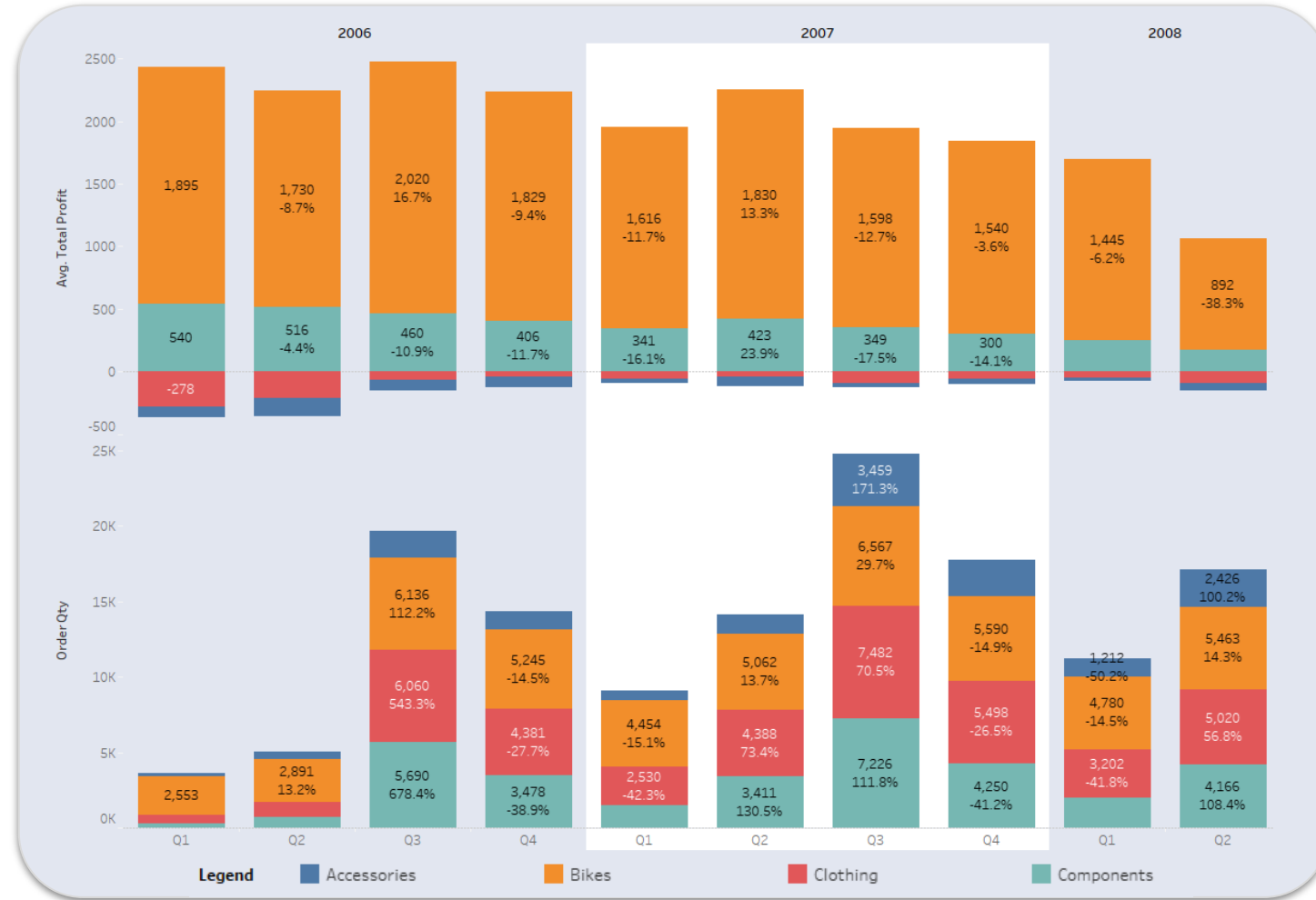
Detailed Analysis

In comparison to Q1:

- Q2 is expected to experience growth in Order Quantity
- Q2 is expected to experience moderate growth or slight decreases in average profit

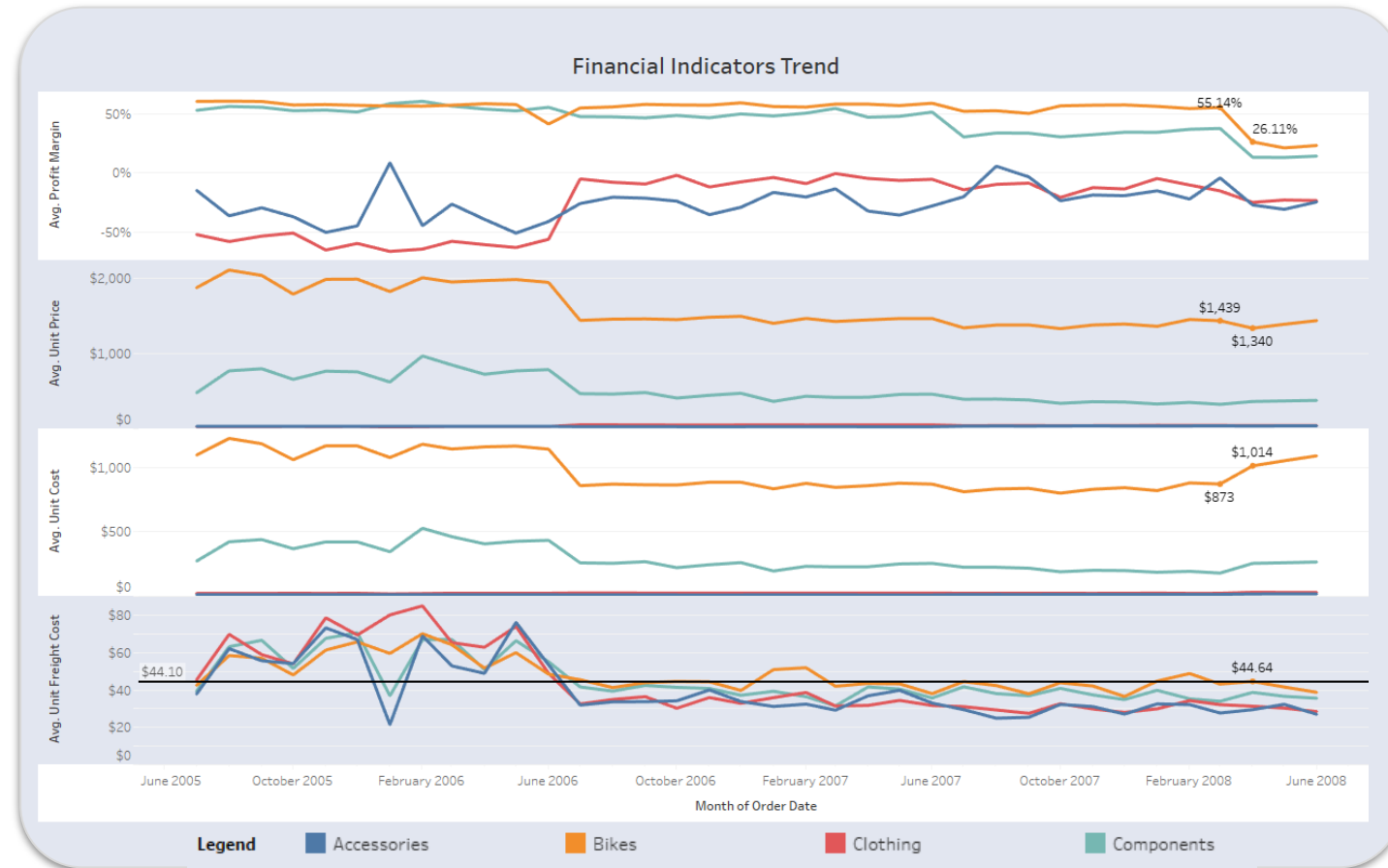
Q2 2008:

- Marked significant order quantity increases in all product categories.
- Experienced average profit decline in all categories.



Detailed Analysis

- Average Unit Freight Cost remained stable in the last two years across all categories.
- Average Unit Cost increased for around 16% for Bikes category, while Components category experienced 30% increase.
- Average Unit Price for both Bikes category declined for around 7.3%, whereas Components price increased for 11.3%.
- Consequently, Average Profit Margin significantly decreased for both Bikes and Components category by **29.03%** and **24.3%**, respectively.



Detailed Analysis

Product Sub Category	Difference in Avg. Total Profit	Difference in Order Qty	Difference in Avg. Unit Price	Difference in Avg. Unit Cost	Difference in Avg. Unit Freight Cost
Bottom Brackets	(\$53)	92	(\$33)	(\$5)	(\$3)
Tires and Tubes	(\$122)	88	\$0	\$0	\$18
Bottles and Cages	(\$5)	193	\$0	\$0	(\$8)
Cleaners	\$7	153	\$0	\$1	(\$6)
Socks	(\$19)	256	\$0	\$1	(\$8)
Caps	(\$17)	157	\$0	\$2	(\$6)
Chains	(\$17)	23	\$0	\$2	(\$4)
Gloves	(\$47)	226	\$0	\$2	\$8
Helmets	(\$62)	432	\$0	\$3	\$3
Saddles	(\$24)	218	(\$3)	\$3	\$2
Hydration Packs	(\$62)	149	\$0	\$5	\$6
Pedals	(\$22)	422	(\$3)	\$5	(\$1)
Vests	(\$25)	282	\$0	\$6	(\$3)
Shorts	(\$7)	263	\$0	\$7	(\$2)
Jerseys	(\$68)	634	\$0	\$10	(\$1)
Bike Racks	(\$22)	199	\$0	\$11	(\$6)
Brakes	(\$20)	44	\$0	\$12	(\$2)
Cranksets	(\$151)	68	(\$37)	\$16	(\$1)
Derailleurs	\$6	110	\$13	\$17	(\$4)
Handlebars	\$14	181	\$25	\$20	\$3
Mountain Frames	(\$114)	444	\$51	\$108	(\$1)
Mountain Bikes	(\$626)	261	(\$114)	\$115	(\$8)
Touring Frames	(\$101)	261	\$117	\$184	\$6
Touring Bikes	(\$473)	198	(\$7)	\$225	(\$1)
Road Frames	(\$60)	304	\$200	\$227	\$5
Road Bikes	(\$584)	224	\$24	\$241	(\$5)

Q1 vs Q2 2008:

- All subcategories experienced order quantity growth
- 23 out of 26 subcategories experienced increases in average unit cost
- 14 subcategories retained the same price, while 5 noted increase lower than increase of the cost

Key Insights & Recommendations

- Collect and store unit freight cost per specific product to ensure reporting consistency and accuracy.
- Clothing and Accessories products are indeed profitable but are usually bought in combination with other product groups, especially Bikes.
- Order Quantity and Unit Freight Cost are remaining stable throughout recent months.
- Unit Cost per product is rapidly increasing, whereas the Unit Price is not following the trend.
- Outdated pricing is a main driver of profit declines.
- Next Steps:
 - Assign freight cost based on the specific product
 - Collect and analyze competitors' data to ensure competitive pricing
 - Develop dynamic dashboards to track cost, price, profit & profit margin timely
 - Develop optimal pricing strategy based on the market trends and ensure profit margin consistency
 - Create loyalty programs & promotional strategies based on total profit per sales order



THANK YOU!