

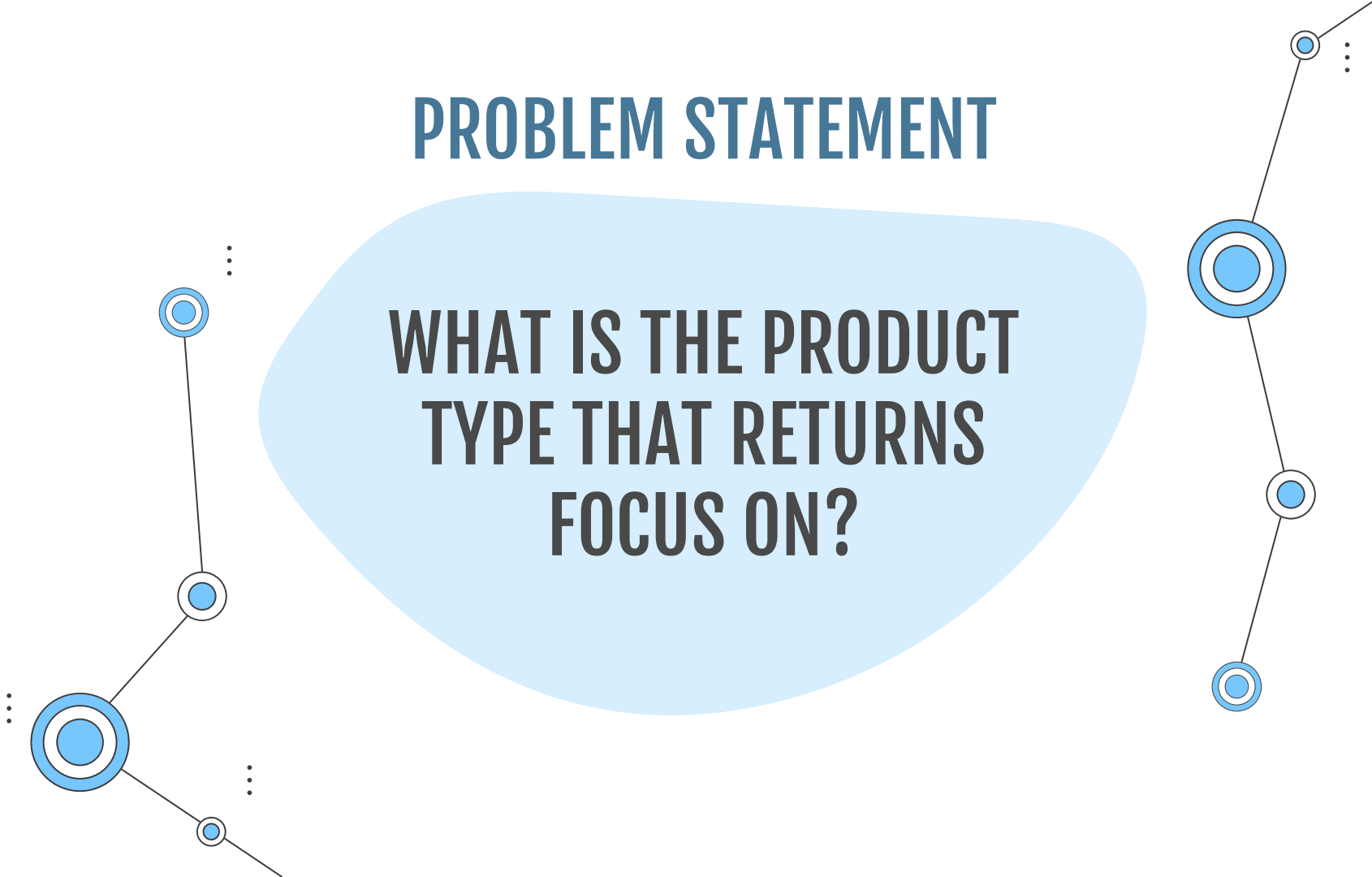


CONTOSO COMPANY PRODUCT RETURN ANALYSIS

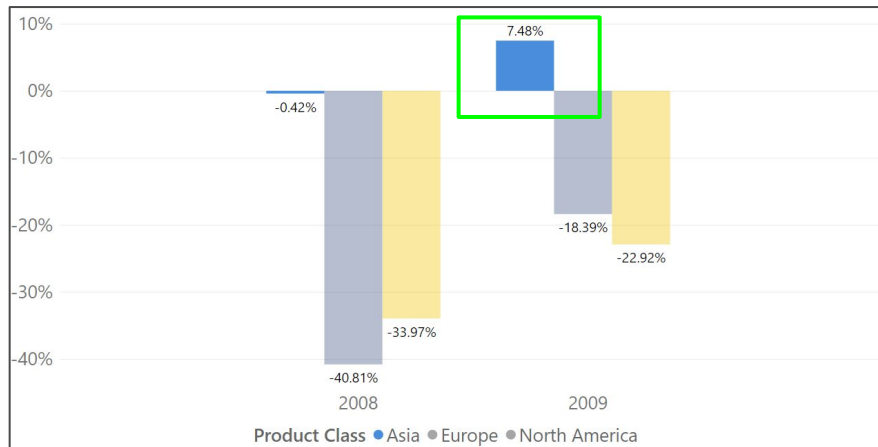
Le Duc Nguyen – MDA K33

PROBLEM STATEMENT

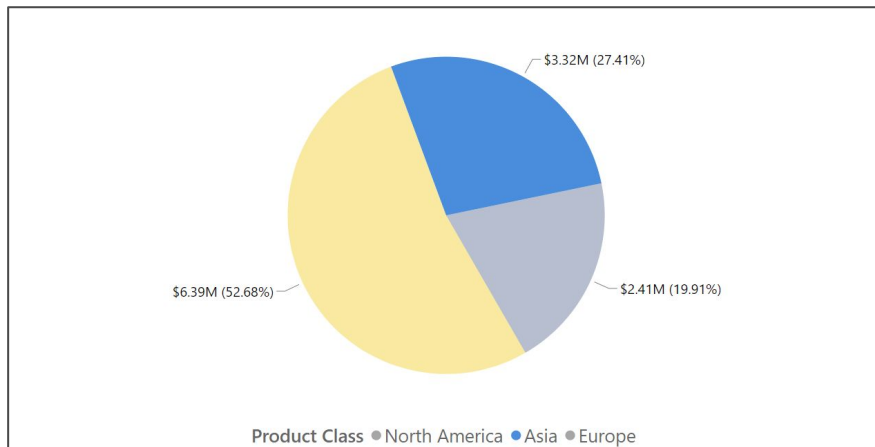
**WHAT IS THE PRODUCT
TYPE THAT RETURNS
FOCUS ON?**



#1: Product Returns increases at Asia market



Return Quantity YoY% distribution by Continents

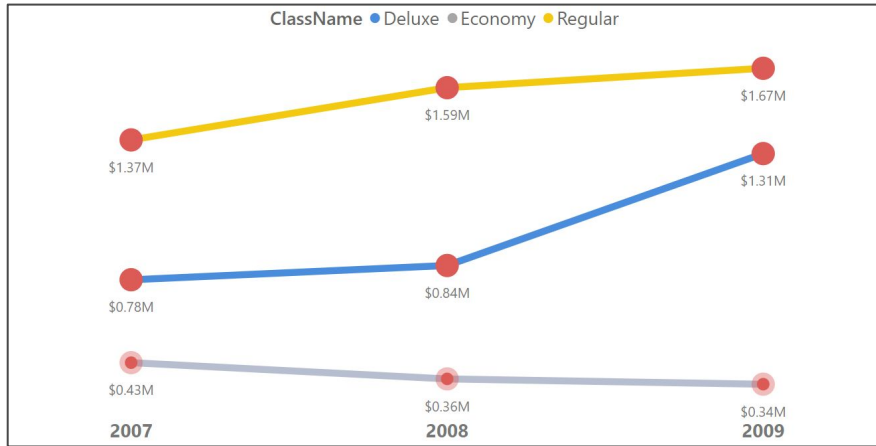
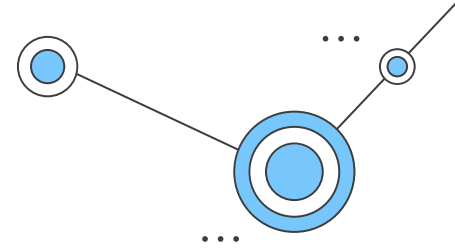


Return Amount distribution by Continents in 2009

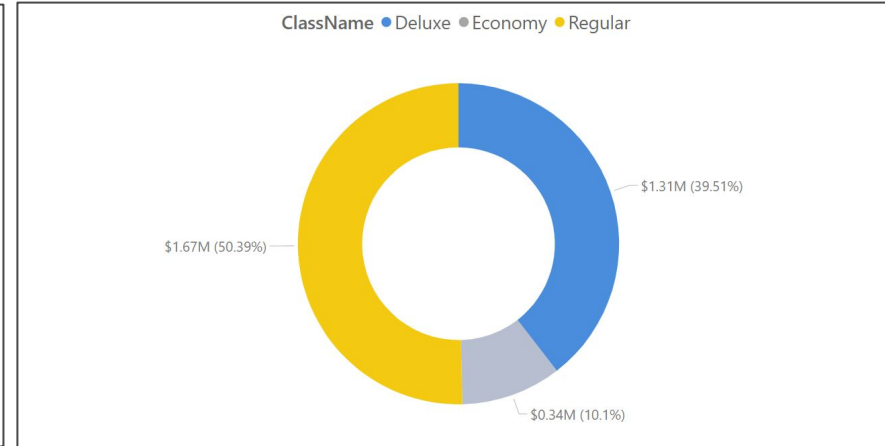
Only the **Asia market** has a **7.48%** rise in Return quantity in 2009, costing **\$3.32** million (Total return amount is ~\$12 million).

➡ **We should pay more attention to figure out how Product Returns increase only in this market.**

#2: Product Returns increases in Deluxe & Regular class at Asia market



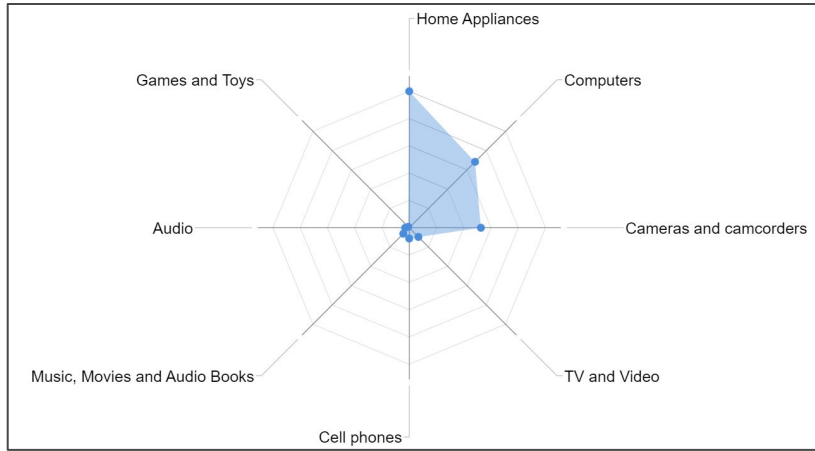
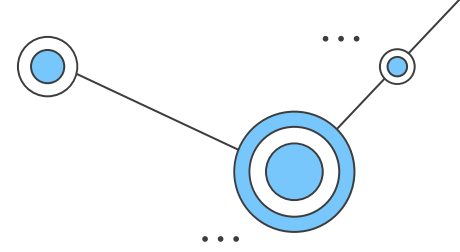
Return Amount by Product Class at Asia market over time



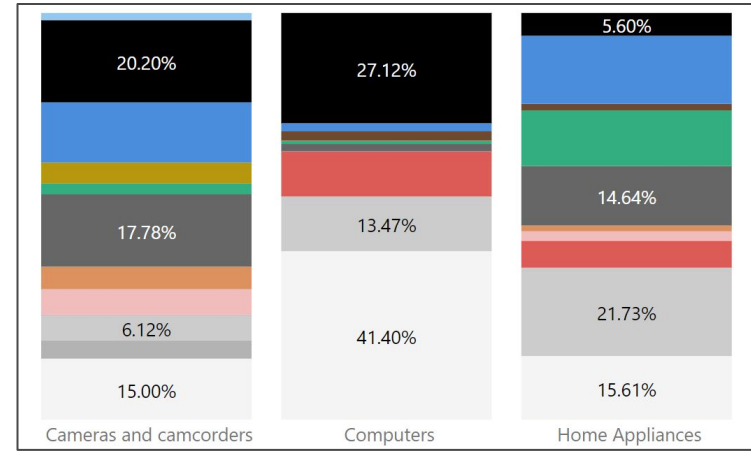
Return Amount distribution by Product Class at Asia market in 2009

In Asia market, **Deluxe & Regular** class product shows an increase over time. In 2009, it accounts for ~90% of total Return amount.

#3: Product Returns increases in Deluxe class at Asia market focus on ...



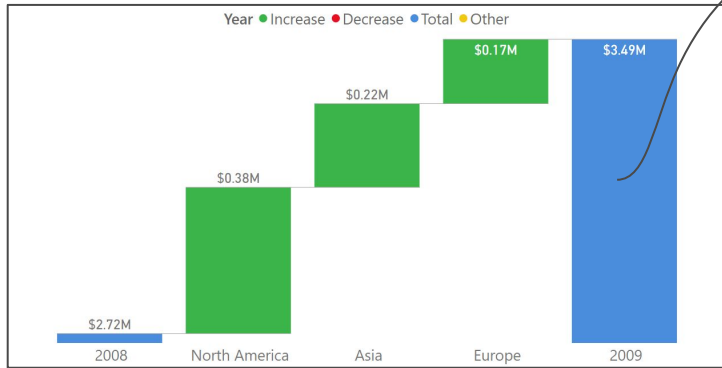
Return Amount by Product Category
(Deluxe class, Asia market)



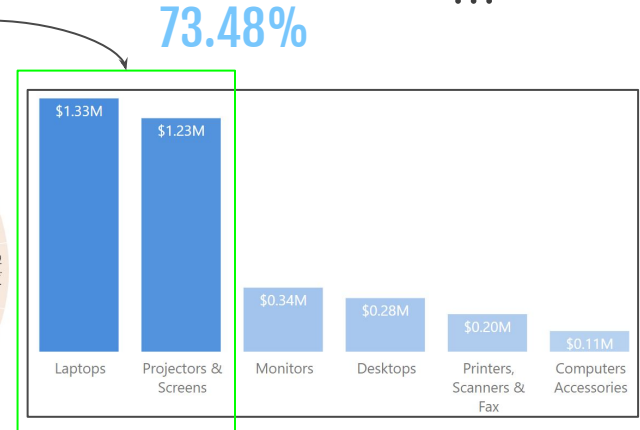
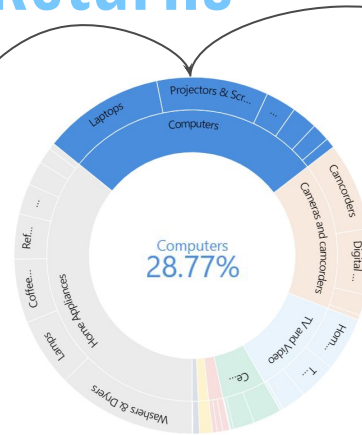
Return Amount distribution by Color
(Deluxe class, Asia market)

Deluxe product class concentrates on **electrical products** in the **Asian** market, which include three categories: **Home appliances, Computers, and Cameras & camcorders**. The majority of the returned items are **Monochrome** in color (White, Silver, Silver Grey and Black).

#4: Increase trend in Computer category across all markets for Returns



Return Amount of Computer in all markets

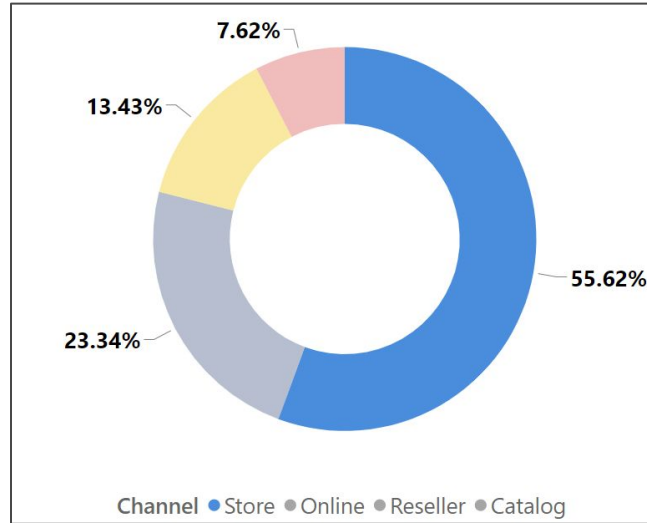


Return Amount distribution in Computer Category

From 2008 to 2009, the **Computer** sector increased returns across the board. In 2009, it accounted for **28.77%** of the overall Return amount. **Laptops & Projectors and Screens** contribute up to **73.48%** of total distribution.

Return Rate % by different Channels

$$\text{Return Rate \%} = (\text{Return quantity} / \text{Sales quantity}) \%$$



Contribution of **Store** in Product Returns quantity

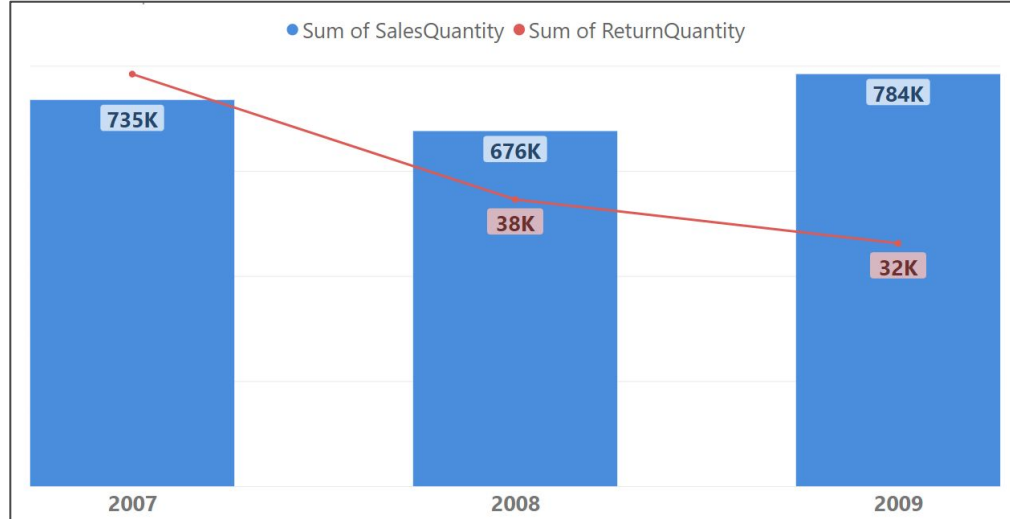


Return Rate % over time by different Channels

Store is one of the channels that provides about ~56% of **Product Returns**. Except for a little gain from the **Catalog** channel between 2007 and 2008 (**0.03%**), the majority of **Return Rate %** across all Channels **decrease** with time.

Return rate % decreased because of ...

$$\text{Return Rate \%} = (\text{Return quantity} / \text{Sales quantity}) \%$$

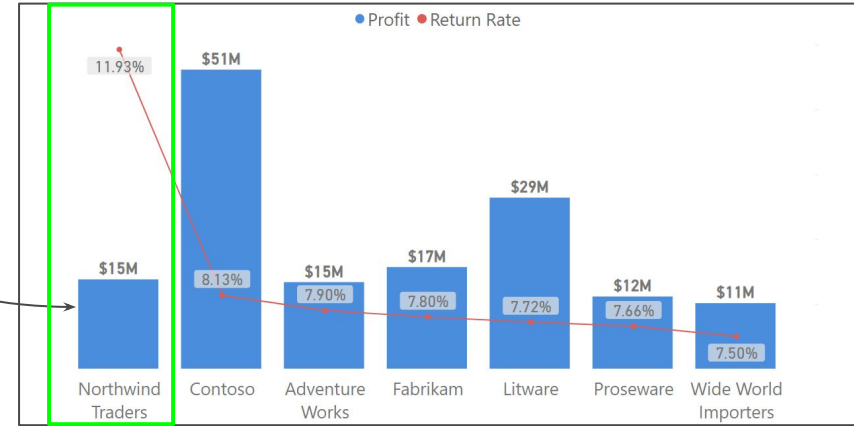
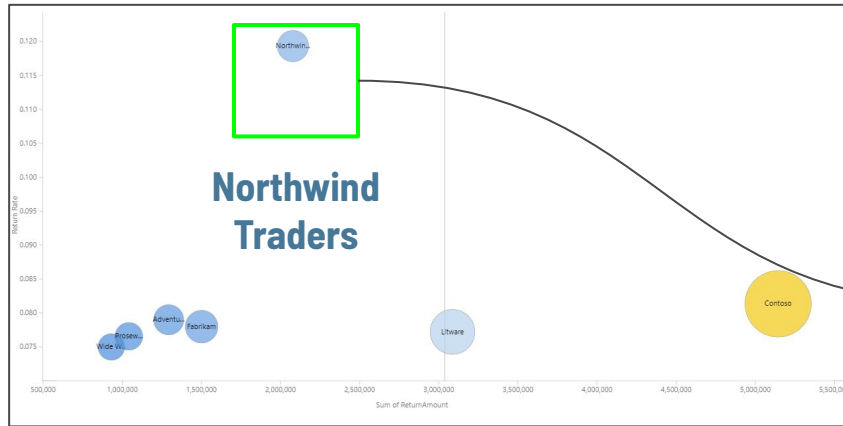


Total Sales quantity and Total Return quantity over time

Due to a decline in **Returns quantity** and a rise in **Sales quantity** of selling products, the **Return rate %** has decreased.

#5: Returns Rate % VS Profit ...

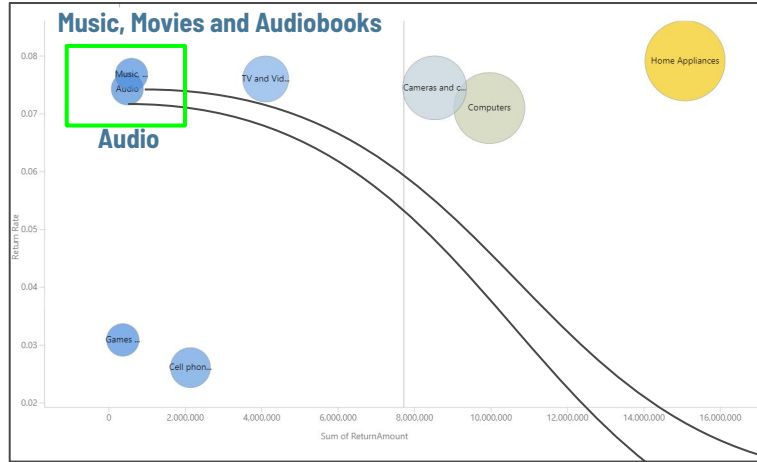
Return Rate % = (Return quantity / Sales quantity) %



Return Rate % and Profit distribution by Brand (in Home Appliances category)

- **Northwind Traders** brand has a significant Return rate of **11.93%** in the **Home Appliances** sector (usually is about 6% to 8%), and the brand generates very little profit from its items.
- ➡ **Given that this brand makes little revenue and has a high return rate, we should consider importing Northwind Traders' s products for Home appliances sales, it is not a potential investment**

#5: Returns Rate % VS Profit ...



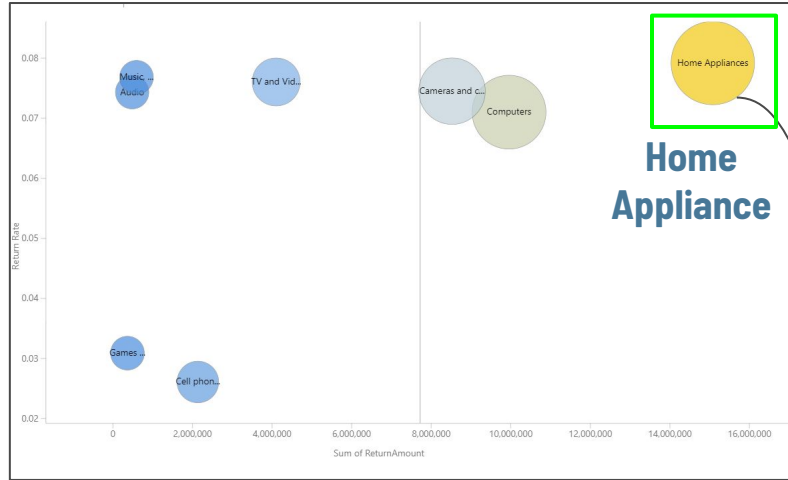
Return Rate % and Return Amount of all Product Categories (Bubble chart)

$$\text{Profit} = \text{Sale amount} - \text{Return amount} - \text{Discount amount}$$

Product Category	Return Rate	Sum of ReturnAmount	Sum of DiscountAmount	Sum of SalesAmount	Profit
Home Appliances	7.92%	\$15.08M	\$3.15M	\$165.53M	147.30M
Computers	7.10%	\$9.96M	\$2.05M	\$134.94M	122.93M
Cameras and camcorders	7.45%	\$8.52M	\$1.82M	\$111.69M	101.35M
TV and Video	7.60%	\$4.10M	\$0.87M	\$52.70M	47.72M
Cell phones	2.61%	\$2.14M	\$0.44M	\$32.58M	30.00M
Games and Toys	3.09%	\$0.36M	\$0.09M	\$7.66M	7.20M
Music, Movies and Audio Books	7.68%	\$0.59M	\$0.12M	\$7.48M	6.77M
Audio	7.43%	\$0.48M	\$0.10M	\$6.37M	5.79M

- **Music, Movies and Audio Books & Audio** have high **Return rate %** and generate the least **Profits** for the company, which are **\$6.77 million** and **\$5.79 million** respectively.
- ➡ We should consider more about two product categories: **Music, Movies and Audio Books & Audio** if they still have potential for investment.

#5: Returns Rate % VS Profit ...



Return Rate % and Return Amount of all Product Categories (Bubble chart)

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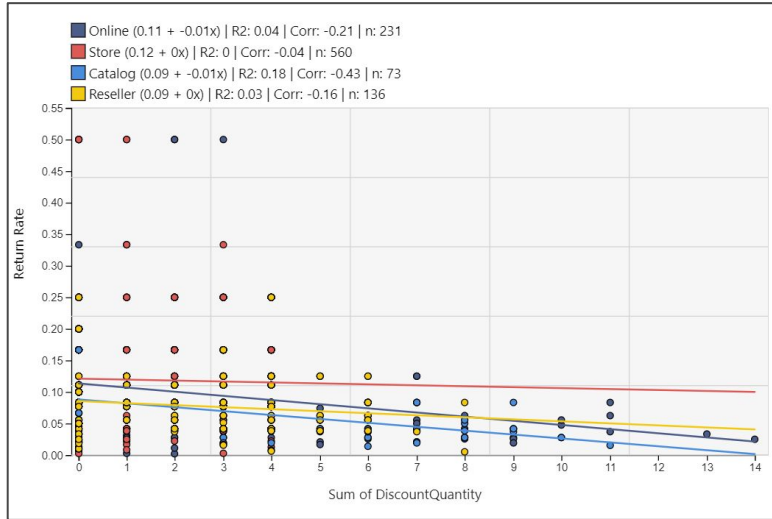
- In addition to having the largest **Total Return amount (~\$15 million)**, the **Home Appliances** category also has the greatest Return volume per unit of sales compared to other categories - which indicating the highest **Return rate (7.92%)**
- Due to its continued ability to generate enormous **profits (~\$147 million)**, this category still offers **investment potential**

AHA MOMENT

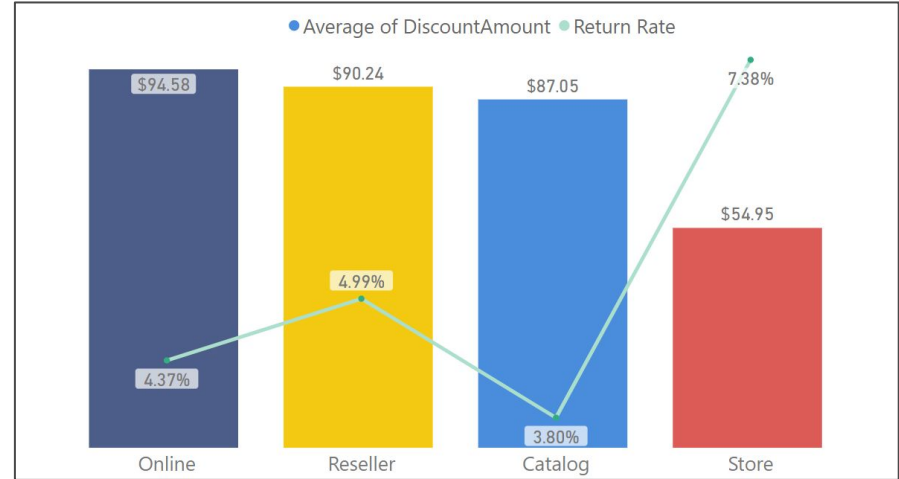
**PRODUCT DISCOUNTS
AFFECT TO THE REDUCE OF
RETURN RATE %**



#6: Decline of Return Rate % by Discounts



Return Rate % and Discount quantity distribution per transaction



Average discount amount and Return rate % per transaction

- When the **Discount quantity** is greater, the **Return Rate%** has reduced for each transaction.
- Channels with lower **Average discounts** have highest **Return rate** %, especially **Store**, which has the highest Return rate **7.38 %** and the lowest Average discount of **\$54.95** per transaction.



DATA STORY TEMPLATE



AHA MOMENT

01

Product discounts affect to the reduce of Return Rate %

RISING INSIGHTS

03

- (1) **Focus on Product with high increase of Returns:** Deluxe and Regular class in Asia market, especially in Computer
- (2) **Return Rate % vs Profit:** the contrast of Return Rate % and generated profit helps us to consider which product type and Brand to potentially invest in the future
- (3) **Return Rate % vs Discounts:** Discounts is a factor to help decline the Return Rate %

02

HOOK & SETTING

There is a decrease of **Return Rate %** because of the decline in Return Quantity and increase in Sales quantity. **(Setting)** ...

Discounts is one of the factor that can make the **Return Rate %** decline, which is what the company target to (Hook)

04

SOLUTION AND NEXT STEPS

- (1) Consider about the reason why specific Product types have high **Return amount** like **Computer category**
- (2) Consider about the investment of Brands and Product Category with least generated profit but high Return rate % like **Music, Movies and Audiobooks** and **Audio**
- (3) Supply **Discounts** to Customer to reduce **Return Rate %**



THANK YOU

