Project Analysis

HAPPY INSURANCE
FOR A HAPPY LIFE

Presented by:

Margarita Dymshits

Natalia Shnaidman

Natalie Elkin

HAPPY INSURANCE
FOR A HAPPY LIFE

AGENDA:

- Assumptions
- Data Analysis Process and Conclusions
- Challenges

HAPPY INSURANCE
FOR A HAPPY LIFE

Assumptions

When we started to explore the data we discovered that there were negative values in ‘Revenue’ column in ‘OrderLines’ table.

We looked into specific order IDs to understand how the negative values behave.

We discovered that the negative value can be a certain part of the total revenue’s order as well as 100%.

Assuming that the negative values are the company's insurance claim payments to the policyholders.

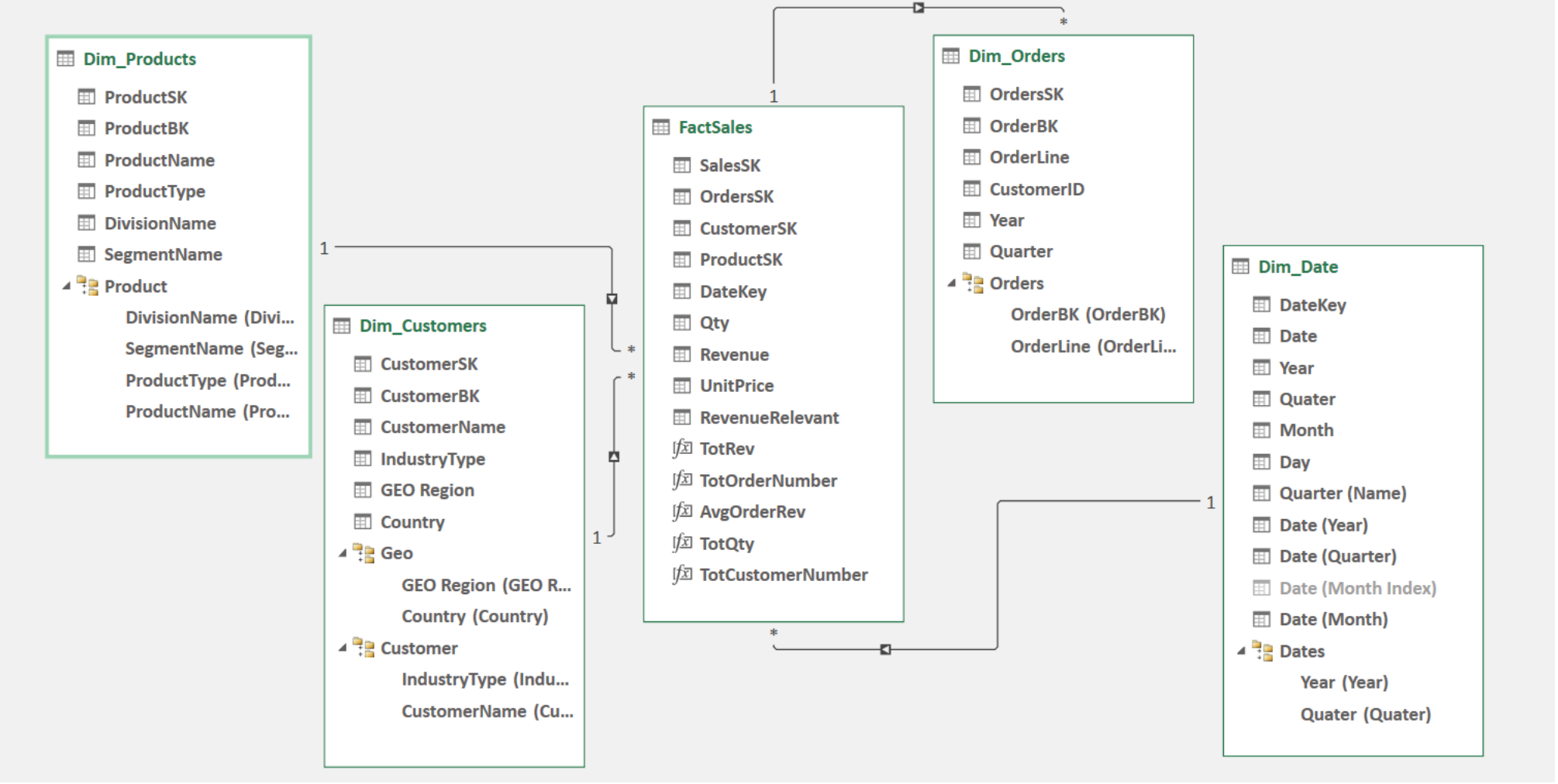
HAPPY INSURANCE
FOR A HAPPY LIFE

Data Analysis Process

- Collecting data
  - From SCV file and Happy insurance DB to Tabular DB
- Manipulating data
  - Creating required features and variables
- Analyzing data
  - Using logical methods and analytical techniques
- Visualizing Data
  - Showing analyzed data in visual or graphical form for easy interpretation
- Conclusions and Recommendations

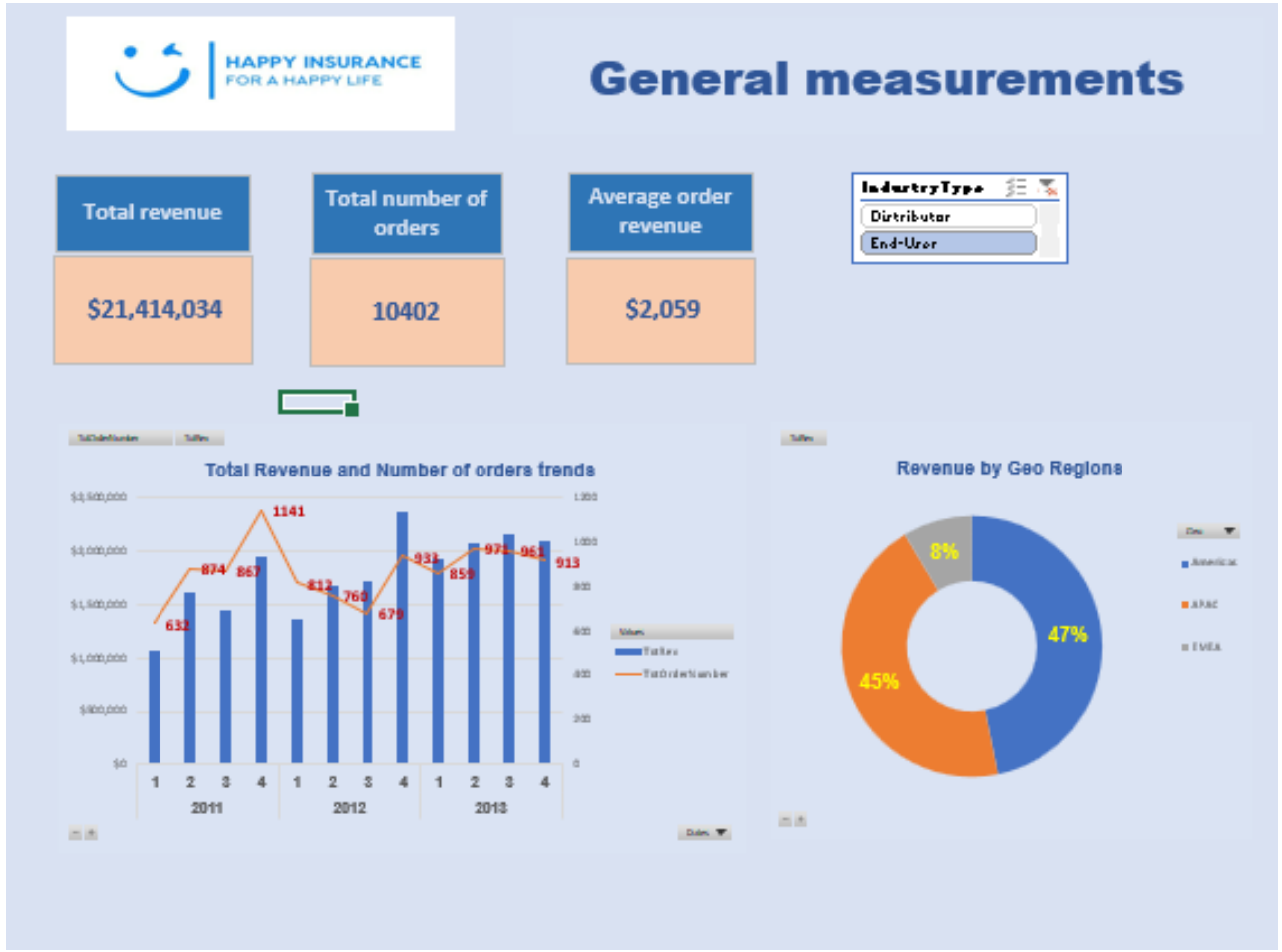
HAPPY INSURANCE
FOR A HAPPY LIFE

Star Schema Data Model



HAPPY INSURANCE
FOR A HAPPY LIFE

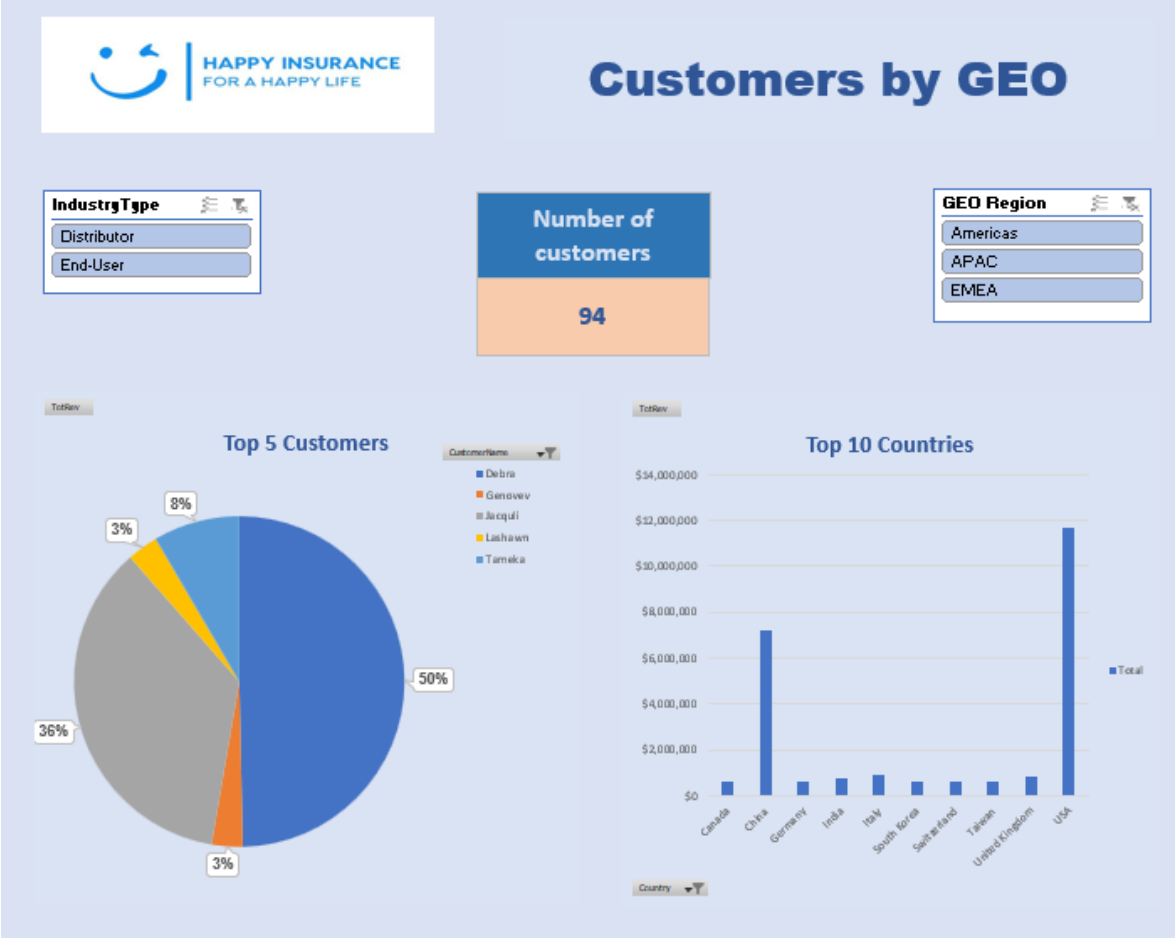
Power Pivot Analysis



Starting from general Measurement to understand the data and business trends.

HAPPY INSURANCE
FOR A HAPPY LIFE

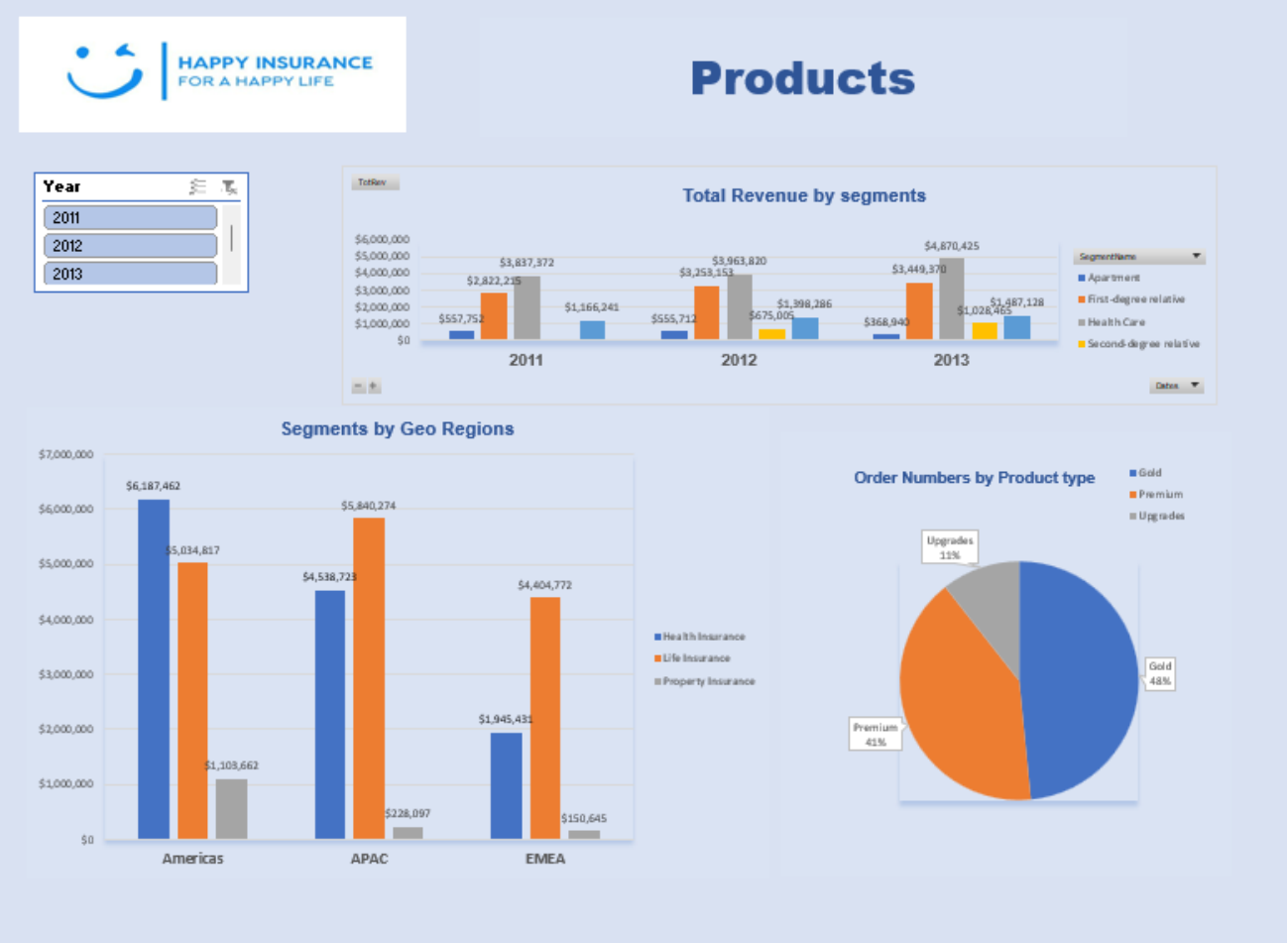
Power Pivot Analysis



Initial customer view, total customer number, types of existing customers, leading countries.

HAPPY INSURANCE
FOR A HAPPY LIFE

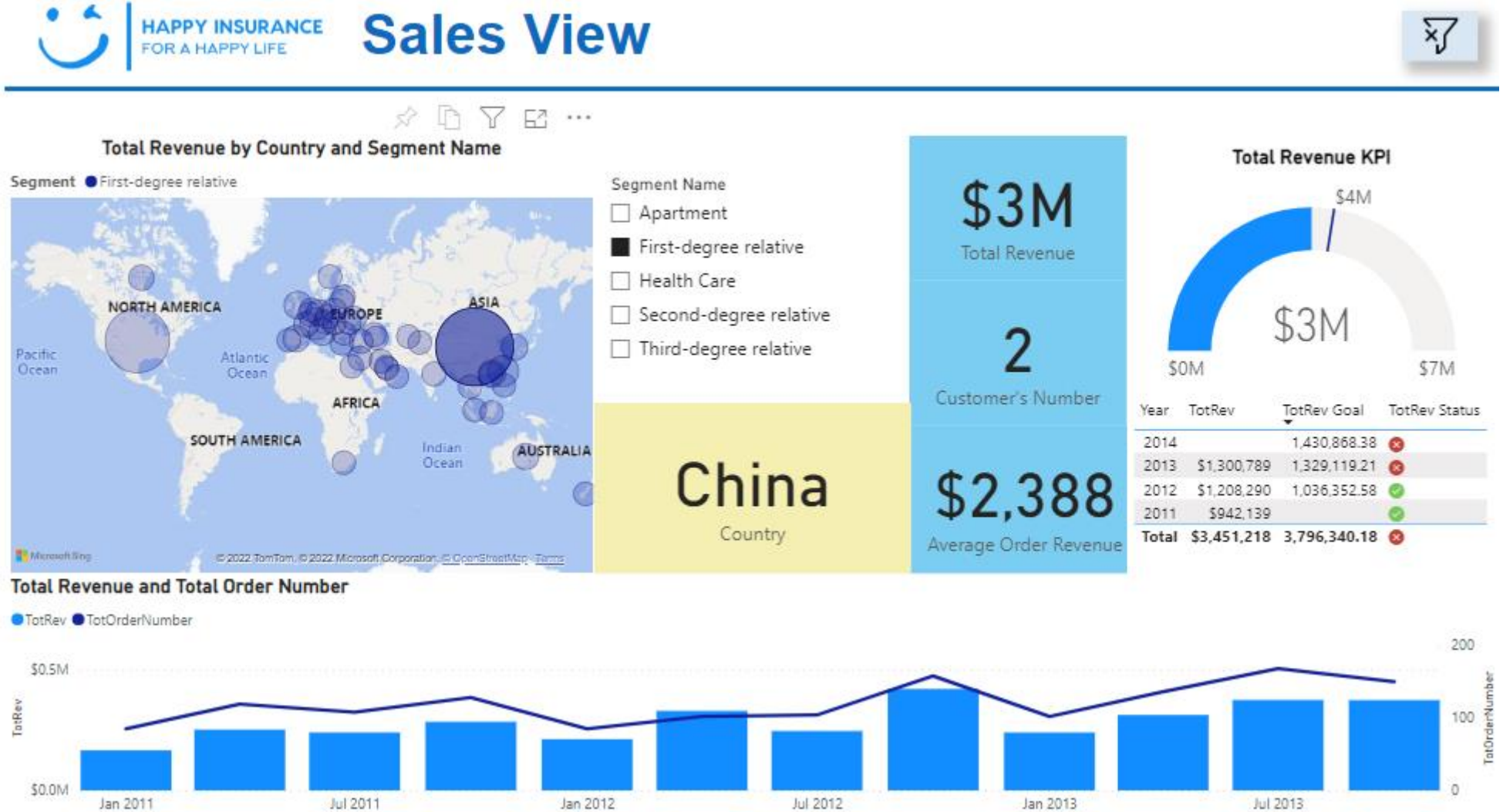
Power Pivot Analysis



Focusing on products, analyzing revenue from each product category in past years.

HAPPY INSURANCE
FOR A HAPPY LIFE

Now, we can dive in even more.
Let’s switch to Power BI analysis.



The purpose of the report is to show a trend of income over the years. Also, to see geographical distribution, main activity indicators and the state of the company in relation to the goals.

It seems that the revenues are on an upward trend, and besides a wide geographical dispersion there is a concentration of revenues from the USA and China.

The report shows income and return indicators and what their percentage of the total activity. Average revenue per booking appears to be broken down by geographic regions.

Average Order Revenue **KPI** - helping in measuring changes in average revenue from orders, when the goal is 12% increase every year.

The average order from EMEA seems to be on the rise and the average for the rest of the regions is down after the pick in 2012.

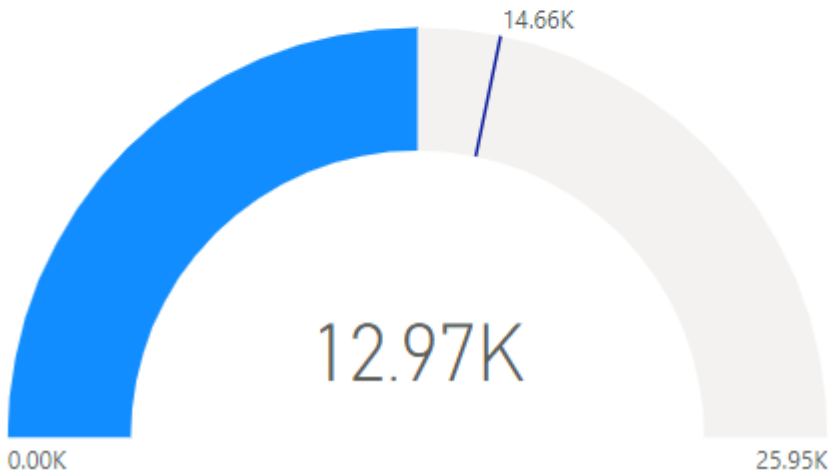
HAPPY INSURANCE
FOR A HAPPY LIFE

YOY Growth & Order Numbers

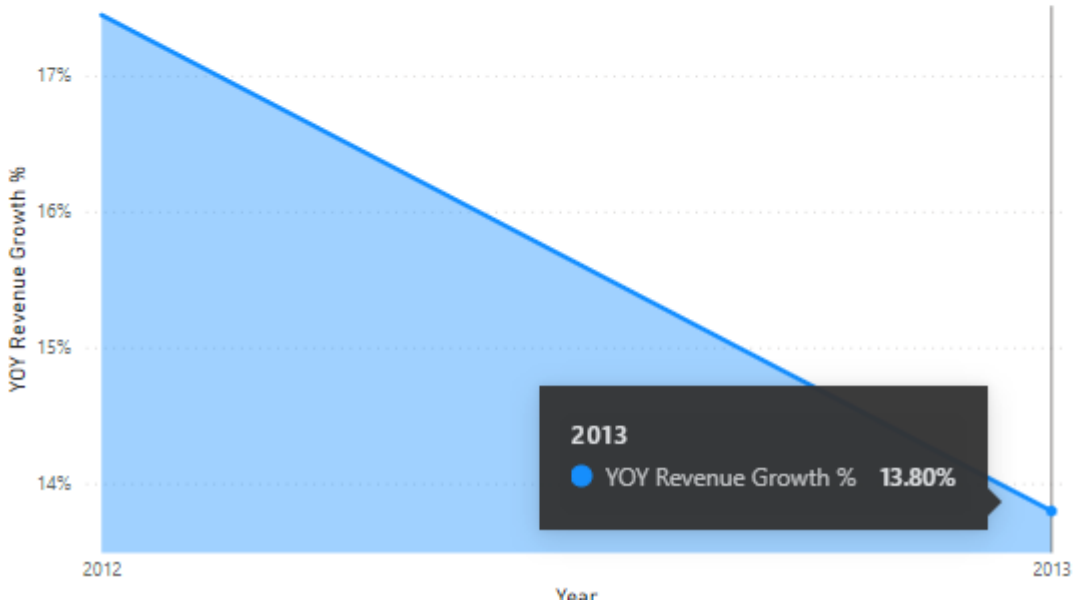
Year	TotOrderNumber	Goal	Status	Trend
2012	3990	5,085.00	✗	↑
2014		5,065.79	✗	↓
2013	4483	4,508.70	!	→
2011	4500		✓	↑
Total	**12973**	**14,659.49**	!	→

Year	TotRev	TotRev SPLY	YOY Revenue Growth %
2011	$8,383,579		
2012	$9,845,976	$8,383,579.47	17.44%
2013	$11,204,328	$9,845,975.89	13.80%
Total	**$29,433,884**	**$18,229,555.36**	**61.46%**

Total Order Number



YOY Revenue Growth,%



The company's revenues seem to be increasing year by year, but the rate of increase has slowed.

Total Order Number **KPI** - allowing company's management to follow total number of orders and increase it 13% every year.

HAPPY INSURANCE
FOR A HAPPY LIFE

What if - Product

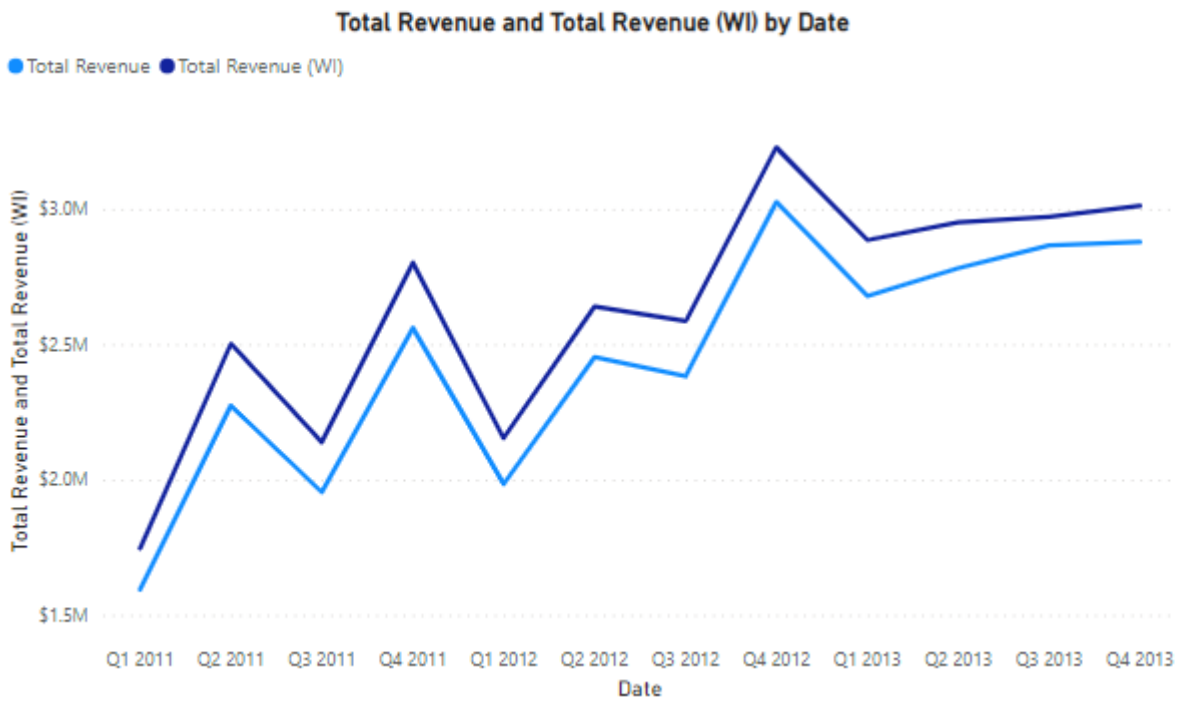
Product Name

Health 1

0.30

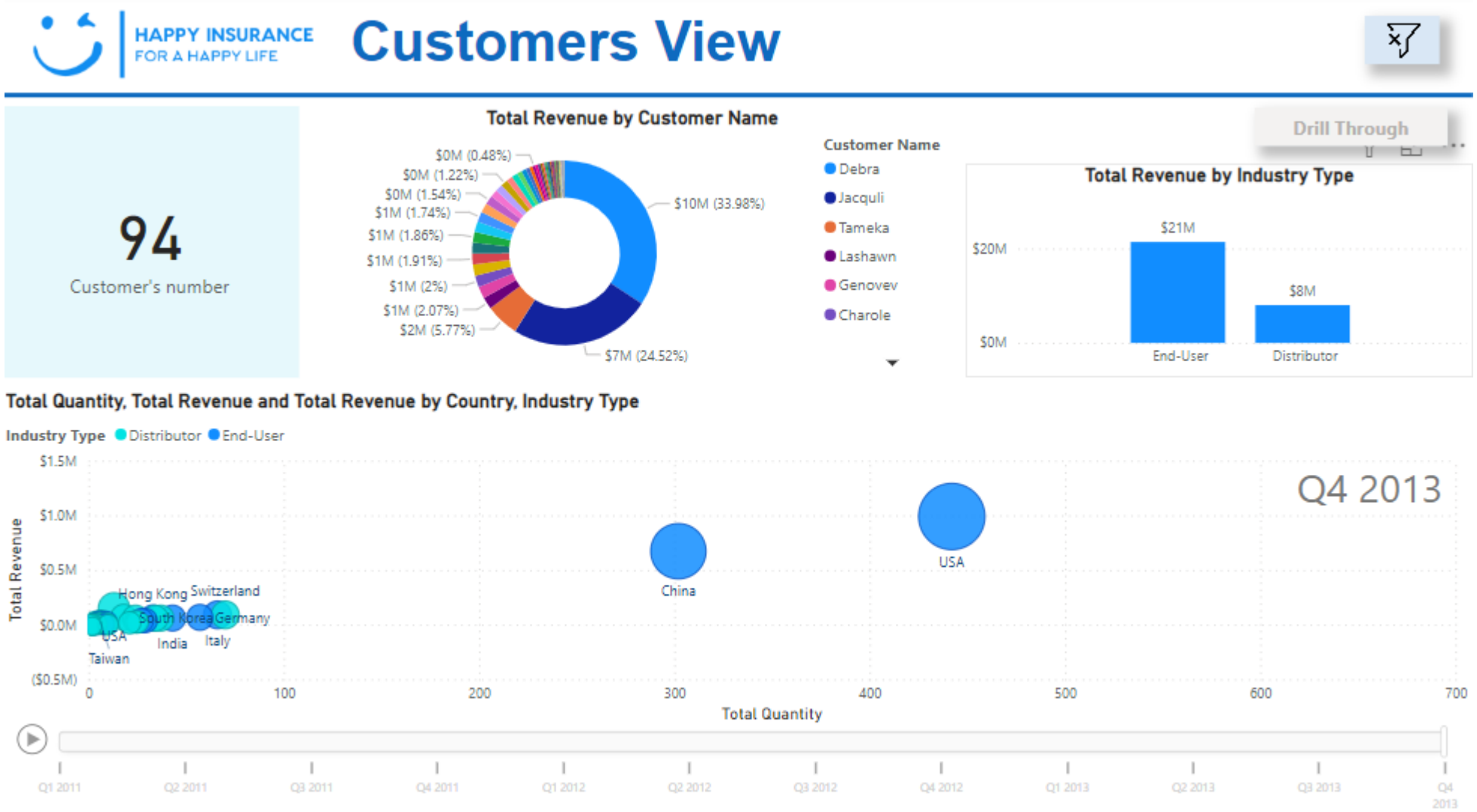
$29.43M
Total Revenue

$31.61M
Total Revenue (WI)

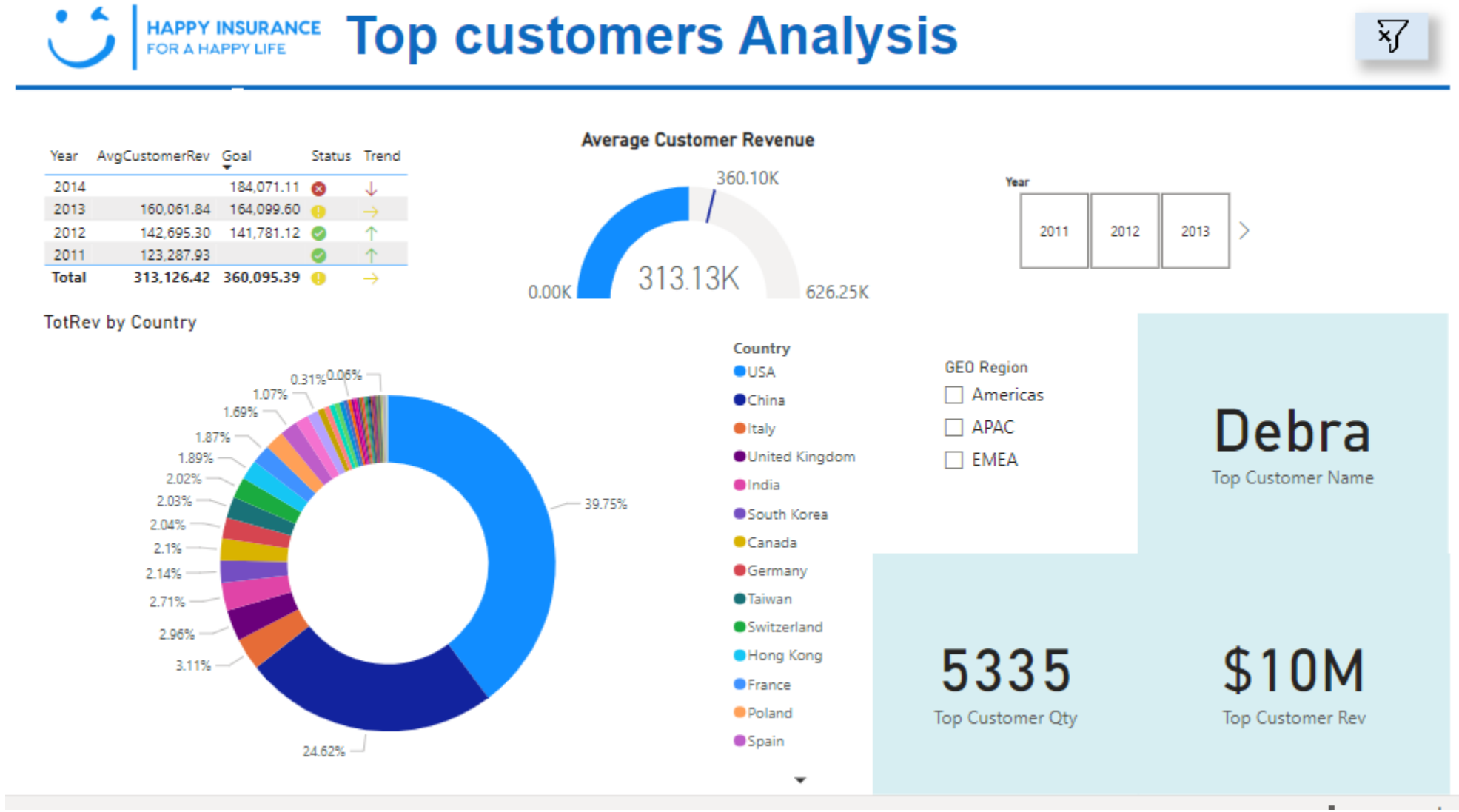


Year	Quater	Total Rev	Total Rev (WI)
2011	1	$1,594,797.41	$1,746,598.57
2011	2	$2,274,072.53	$2,501,378.21
2011	3	$1,954,007.44	$2,138,591.91
2011	4	$2,560,702.09	$2,800,900.03
2012	1	$1,984,369.27	$2,154,453.97
2012	2	$2,452,693.23	$2,640,231.64
2012	3	$2,383,086.32	$2,585,374.68
2012	4	$3,025,827.06	$3,226,843.23
2013	1	$2,678,671.20	$2,885,112.68
2013	2	$2,781,502.54	$2,951,429.30
2013	3	$2,866,330.48	$2,970,336.21
2013	4	$2,877,824.25	$2,912,410.08
Total		**$29,433,883.83**	**$31,613,669.51**

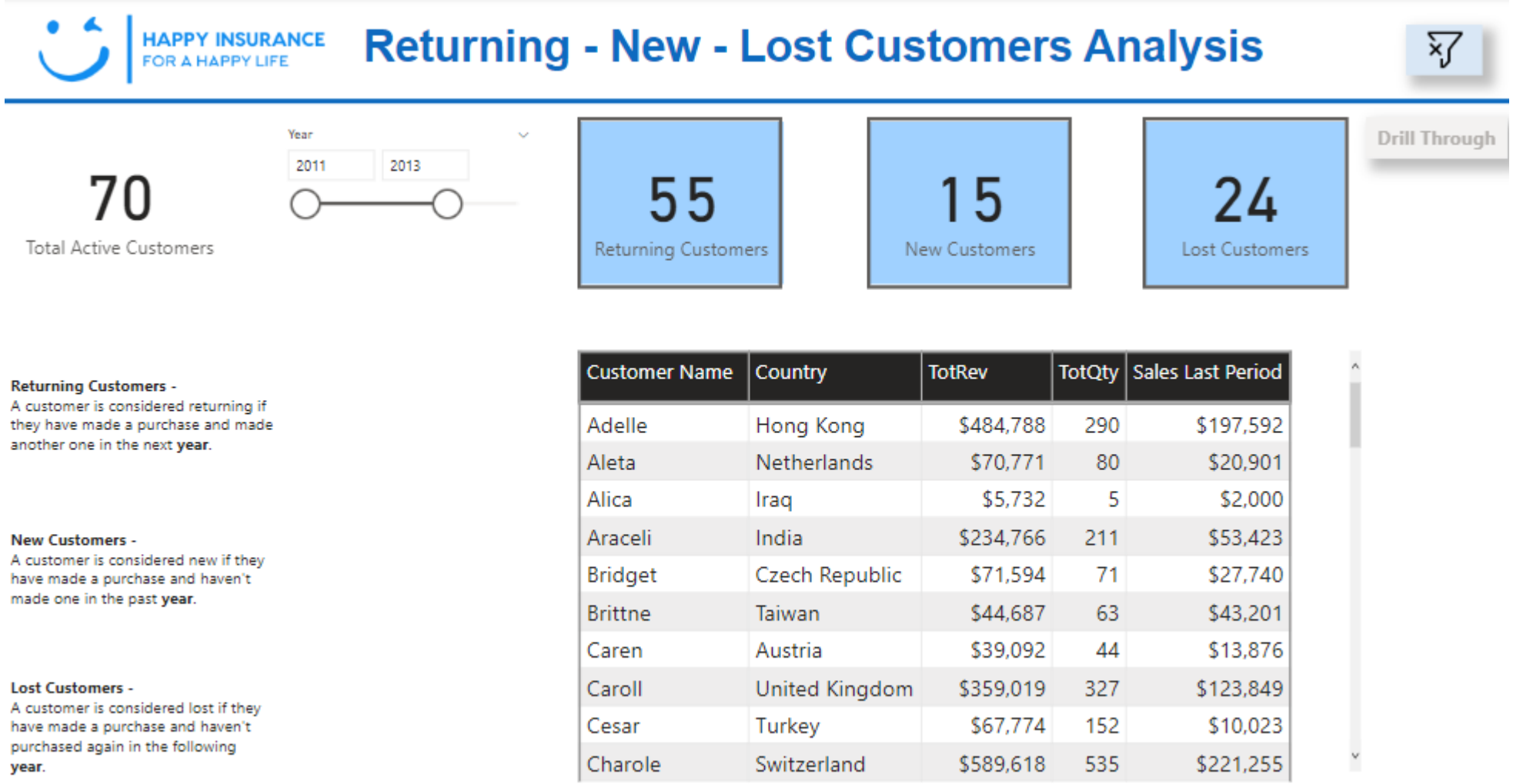
This report shows how changes in product prices affect the total income.



The report shows a snapshot of the total number of customers, in terms of quantity, concentration by region, etc. You can see more details about a specific customer through 'Drill Through'. In the lower graph you can see that the company's revenue and the largest amount of orders belongs to two main customers.



The report presents an analysis of top customer by country.



The report allows you to see returning customers, new customers and lost customers according to selected years at the click of a button. In addition, you can see customer revenues according to date filtering. It is possible to see more details about a specific customer by clicking on the 'Drill Through' button.

HAPPY INSURANCE
FOR A HAPPY LIFE

Customer ID

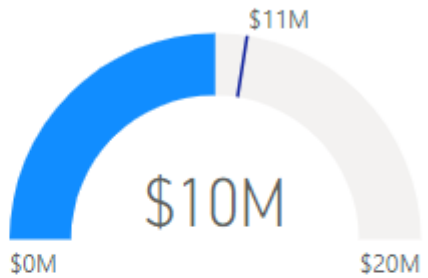
$10M
Total Revenue

($760.33K)
Total Refund

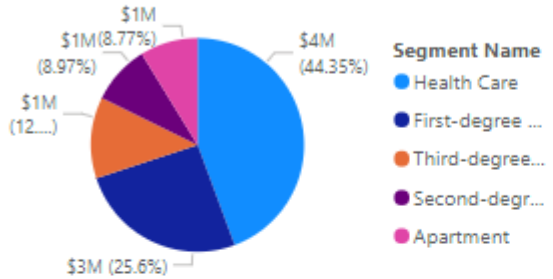
5335
Total Quantity

10.00M
AvgCustomerRev

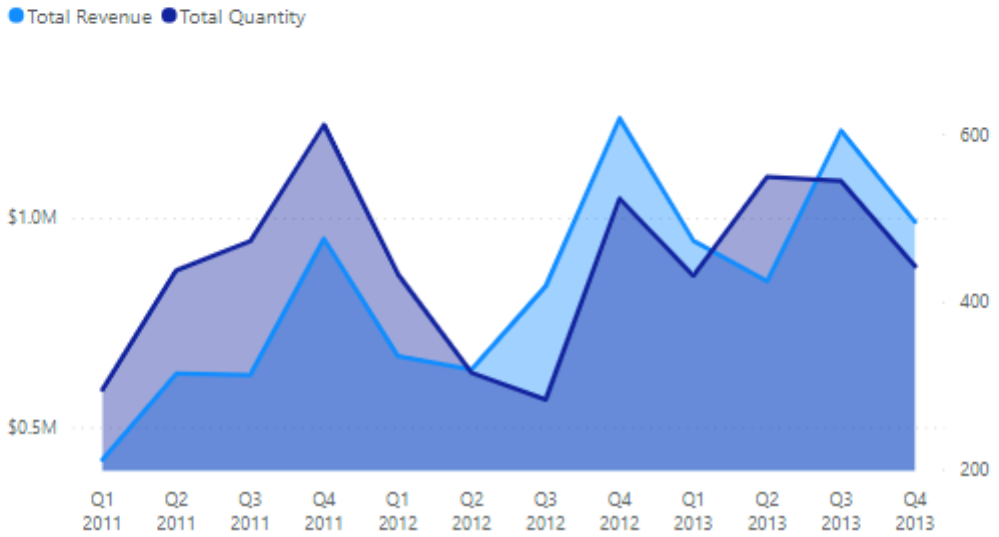
Total Revenue



Total Revenue by Segment



Total Revenue and Total Quantity by Date



Debra
Customer Name

USA
Country

End-User
Industry Type

HAPPY INSURANCE
FOR A HAPPY LIFE

Customers Table

Customer Name	TotRev	Customer Rev variable	TotQty	Customer Quantity variable	Percent TotQty	Total Revenue, %	Customer's number	Product Type
Debra	$549,735	$1,455,748.17	2679	10795	24.82	37.76	1	Gold
Debra	$9,086,412	$26,600,907.73	2003	6699	29.90	34.16	1	Premium
Debra	$364,761	$1,377,227.94	653	2094	31.18	26.49	1	Upgrades
Jacquli	$6,963,370	$26,600,907.73	1561	6699	23.30	26.18	1	Premium
Jacquli	$222,697	$1,455,748.17	1650	10795	15.28	15.30	1	Gold
Neil	$174,890	$1,377,227.94	251	2094	11.99	12.70	1	Upgrades
Syreeta	$104,727	$1,377,227.94	112	2094	5.35	7.60	1	Upgrades
Lashawn	$88,387	$1,377,227.94	148	2094	7.07	6.42	1	Upgrades
Tameka	$1,686,081	$26,600,907.73	171	6699	2.55	6.34	1	Premium
Garry	$86,453	$1,377,227.94	109	2094	5.21	6.28	1	Upgrades
Tobie	$78,444	$1,377,227.94	115	2094	5.49	5.70	1	Upgrades
Charole	$72,981	$1,455,748.17	323	10795	2.99	5.01	1	Gold
Daryl	$60,427	$1,377,227.94	83	2094	3.96	4.39	1	Upgrades
Daryl	$52,746	$1,455,748.17	639	10795	5.92	3.62	1	Gold
Robby	$49,374	$1,377,227.94	75	2094	3.58	3.59	1	Upgrades
Lashawn	$46,401	$1,455,748.17	191	10795	1.77	3.19	1	Gold
Diana	$42,919	$1,377,227.94	58	2094	2.77	3.12	1	Upgrades
Lizzett	$40,846	$1,377,227.94	54	2094	2.58	2.97	1	Upgrades
Pamelia	$42,015	$1,455,748.17	189	10795	1.75	2.89	1	Gold
Emmitt	$36,129	$1,455,748.17	183	10795	1.70	2.48	1	Gold
Jacquli	$31,706	$1,377,227.94	40	2094	1.91	2.30	1	Upgrades
Garry	$33,203	$1,455,748.17	190	10795	1.76	2.28	1	Gold
Genovev	$565,964	$26,600,907.73	174	6699	2.60	2.13	1	Premium
Latasha	$30,166	$1,455,748.17	611	10795	5.66	2.07	2	Gold
Robby	$28,931	$1,455,748.17	355	10795	3.29	1.99	1	Gold
Total	**$29,433,884**	**$29,433,883.83**	**19588**	**19588**	**100.00**	**100.00**	**94**	

Year, Quater
- 2011
- 2012
- 2013

View of customers, combined with their revenue, product quantity and share of every product from total revenue and total quantity

HAPPY INSURANCE
FOR A HAPPY LIFE

Dax Studio

Dax Query No. 1:

By adding total number of orders to every client , ordered desc, we can see that top two clients are from USA & China.

```
1 -- Added total number of orders to every client + ordered desc
2 -- top 2 clients are from usa & china ,they are bigger by far from others
3
4
5 EVALUATE
6 (
7 ADDCOLUMNS ('Customers', "OrderNo",[TotOrderNumber], "TotRev", [TotRev])
8 )
9 ORDER BY [totrev] DESC
```

100 %

Results

CustomerSK	CustomerBK	Customer Name	Industry Type	GEO Region	Country	OrderNo	TotRev
100	1	Debra	End-User	Americas	USA	4459	10000907.67...
107	8	Jacquli	End-User	APAC	China	3070	7217772.2657
102	3	Tameka	Distributor	Americas	USA	113	1697793.9713
112	13	Lashawn	End-User	EMEA	Italy	334	610128.922
108	9	Genovev	Distributor	Americas	Canada	126	608463.1609
104	5	Charole	Distributor	EMEA	Switzerland	143	589617.9426
103	4	Daryl	End-User	EMEA	Germany	438	580345.2799
128	29	Syreeta	End-User	APAC	India	404	561624.3972
115	16	Emmitt	End-User	APAC	Taiwan	369	552907.8076
118	19	Lizzett	Distributor	EMEA	France	188	548946.4611
159	60	Neil	Distributor	EMEA	Poland	99	536990.2404
113	14	Garry	End-User	EMEA	United Kin...	446	512989.9998
121	22	Adelle	End-User	APAC	Hong Kong	221	484788.4278
111	12	Robby	Distributor	EMEA	Spain	171	451976.7609
109	10	Pamelia	End-User	APAC	Australia	278	379622.0048

HAPPY INSURANCE
FOR A HAPPY LIFE

Dax Studio

Dax Query No. 2:

Nonactive customer indicator – this query shows if a customer have made a purchase in a certain year and haven't purchased again in the following year.

This information is very powerful because it can dictate sales strategy and marketing strategy for this particular group.

```
14
15 -- Non Active Customers (Indication from preveous Year)
16
17 EVALUATE
18
19 SUMMARIZECOLUMNS(
20 Customers[Customer Name],
21 'Date'[Year],
22 "Total Revenue", [TotRev],
23 "NonActive Indicator", [NonActiveCustomers]
24 )
25
26 ORDER BY
27 Customers[Customer Name] ASC,
28 'Date'[Year] ASC
```

75 %

Results

Customer Name	Year	Total Revenue	NonActive Indicator
Abby	2011		0
Abby	2012	4224.7369	0
Abby	2013		1
Abby	2014		0
Adelle	2011	99688.1201	0
Adelle	2012	187508.3295	0
Adelle	2013	197591.9782	0
Adelle	2014		1
Aleta	2011	5300.9346	0
Aleta	2012	44569.2652	0
Aleta	2013	20900.6701	0

Output | Results | Query History

HAPPY INSURANCE
FOR A HAPPY LIFE

Dax Studio

Dax Query no 3:

A summarized view of revenue for each customer with product name and year of purchase.

```
--Sales and Avg sales by product & customer


evaluate(
        summarize(
                'Sales',
                Sales[CustomerSK],
                Sales[ProductSK],
                'Date'[Year],
                Customers[Customer Name],
                Products[Product Name],
                "Total Sales", SUM(Sales[Revenue]),
                "Average Sales", AVERAGE(Sales[Revenue])
            )
)
order by [ProductSK], [customersk]
```

100 %

Results

CustomerSK	ProductSK	Year	Customer Name	Product Name	Total Sales	Average Sales
100	100	2012	Debra	Major 1	474139.681	3225.44
100	100	2013	Debra	Major 1	558225.8276	3322.7728
100	100	2011	Debra	Major 1	448585.0392	3159.0496
101	100	2011	Kasha	Major 1	2000	2000
102	100	2011	Tameka	Major 1	5369.5962	5369.5962
102	100	2013	Tameka	Major 1	11869.0861	5934.5431
103	100	2013	Daryl	Major 1	20001.5155	2222.3906
103	100	2011	Daryl	Major 1	31644.2376	2260.3027
103	100	2012	Daryl	Major 1	47019.6215	2612.2012

HAPPY INSURANCE
FOR A HAPPY LIFE

Main conclusions and recommendations

- Company business is growing between 2011-2013 years, we see the grow of total revenue. However, Year over Year growth is slowing.
- Company make payments(refunds) on a regular basis, but it is part of its main business, total refunds estimates around 3.5% from total revenue and don’t change dramatically over the years.
- Company has major dependence on two biggest clients: Debra (USA) and Jacquin (China). This kind of dependency puts a significant risk on company’s existence, if one of those two will decide to stop work with us. Therefore, to minimize this risk, company should make effort to diverse its client base ASAP.

HAPPY INSURANCE
FOR A HAPPY LIFE

Challenges

- Understand the logic of the given database and build the tabular model accordingly without losing data. For example, creating the fact table while combining two SKs and transferring the sales records to the Dim_OrderLines table.
- Define who is a new customer, who is a returning customer and who is a lost customer, apply the logic and present correct data.
- Overcome the fact that measure works according to the context when you want to show the sum of the field in a certain visual.
- Check how the measures and other data objects are reflected in the tables and whether they present correct data.
- Sorting quarter name (text variable) by year (numeric variable).
- Showing analyzed data in visual or graphical form to improve growth and increase business profitability.

HAPPY INSURANCE
FOR A HAPPY LIFE

Thank you