

Churn Analysis

CCA	The Who!	The Why!	Data Processing Steps !	Questions!	Dashboard 1,1 Overview	Dashboard 1,2 Age Brackets & Groups	Dashboard 1,3 Contract Type & Payment Method	Dashboard 1,4 Internation Charges and Data Plan	1.1 Summary of Results Handouts	1.2 Summary of Results Handouts
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Telecom Provider (Databel)

Audience :

Monthly board meeting. There are 10 people in the audience looking at a big screen across a large room and also have a printed summary (handouts) for specific questions in the Summary of Results pages

The Data Key Characteristics :

- One big table containing 29 columns
- One row per customer
- Snapshot of the database at a specific moment in time

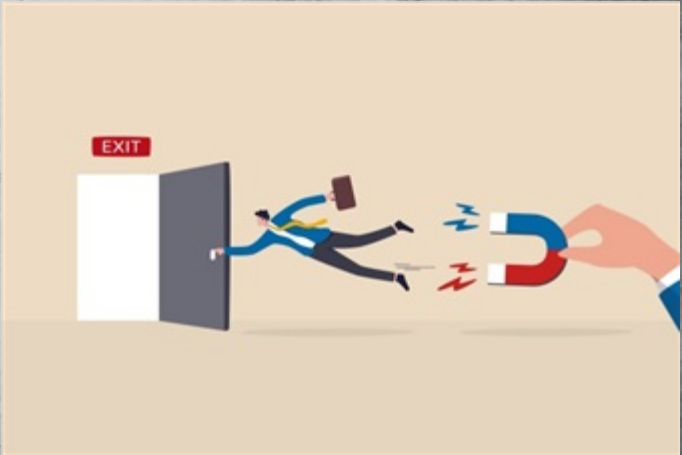
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Why does customer churn analysis matter?

Problem Description

- As customer churn becomes a major contributor to the decline in revenue, it becomes crucial for businesses to bring it under control using cognitive technologies to collect, analyze and visualize real-time customer data to find analytics solutions.
- For subscription-based businesses, reducing customer churn is a top priority , Databel suffering from Leaky bucket problem which means customers stopped doing business with the company .
- Since keeping customers is easier than getting new customers Databel tasked our team figuring out why customers are churning at the rate they are .



Business Case/Other Goals

- Analyze databel data to discover why customers are churning.
- Investigating churn patterns and find ways to reduce churn rate.

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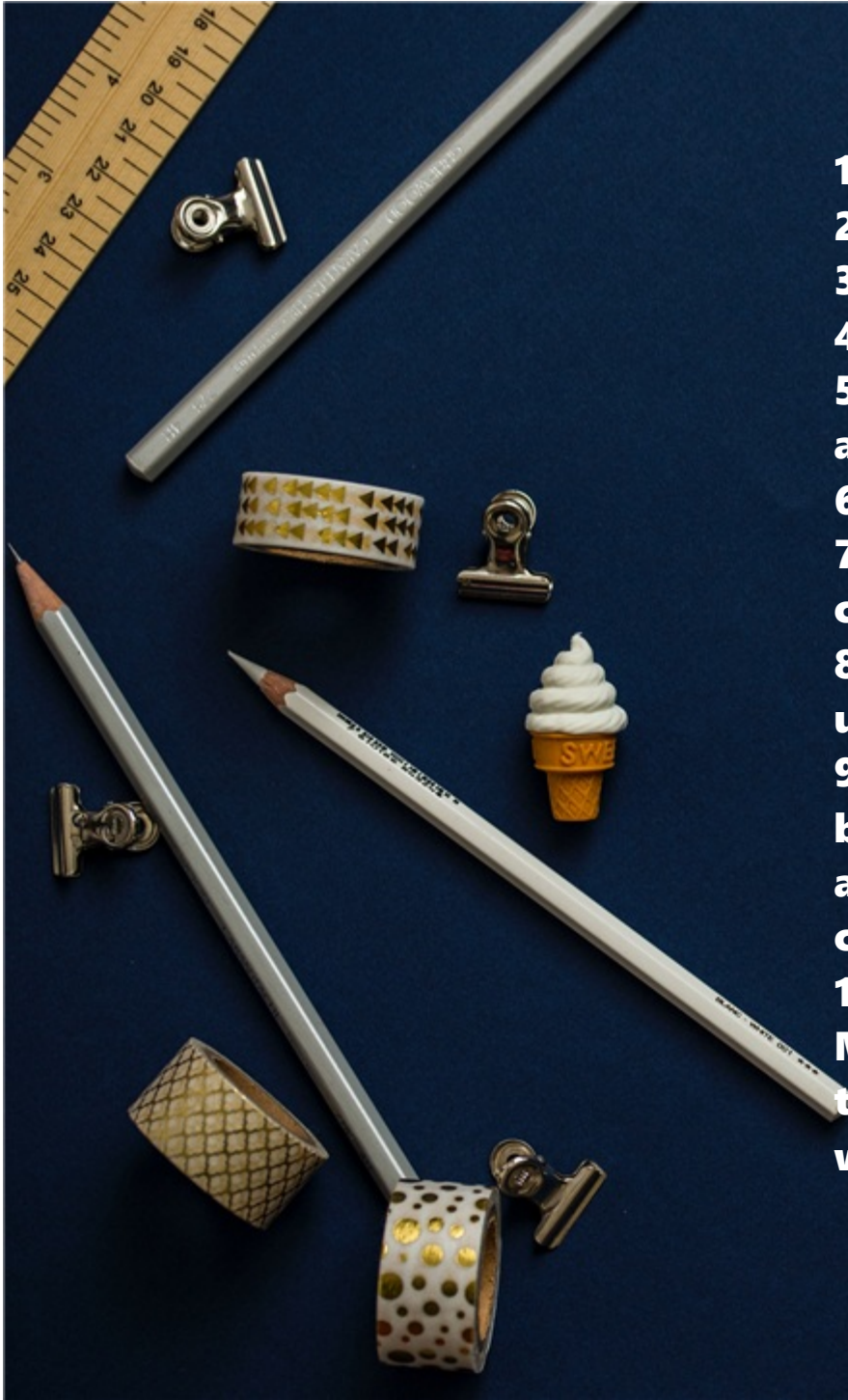


Data Processing Steps :

- **Data Check incase there are duplicate rows to avoid double count.**
- **Created (Churn rate) column by converting (Churn label) column to a binomial column (Churned) that contain a 1 or 0 instead of 'Yes' or 'No' indicating if the customer churned or not and use that to calculate churn rate.**
- **Created Bins for (Age) column to analyze age of churned customers.**
- **Created 5 calculated fields and dynamic parameter (Pick Metric) that allows the stakeholders to interact with the data between 4 different measures.**

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Questions that have been answered

- 1- What's the total churn rate for Databel?
- 2- What's the most prevalent churn reason?
- 3- Which state has the highest churn rate?
- 4- What's the churn rate for senior citizens group?
- 5- What's the average churn rate for people aged 70 and above?
- 6- Which group size has the lowest churn rate?
- 7- What's the churn rate for people on an unlimited plan who consume less than 5 GB of data?
- 8- What's the churn rate for people who are not on an unlimited plan who consume 5-10 GB of data?
- 9- The churn rate of customers who have an international plan but don't call internationally is skyhigh. How many customers are part of this group ? And What's the average monthly charge for that same group?
- 10- How many customers that churned are on a Month-to-Month contract and pay by Direct Debit? and What's the average number of customer service calls for customers who are on a month-to-month contract and by direct debit?

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You Can Use the Bar, Map, Pie and Doughnut charts as a Filter

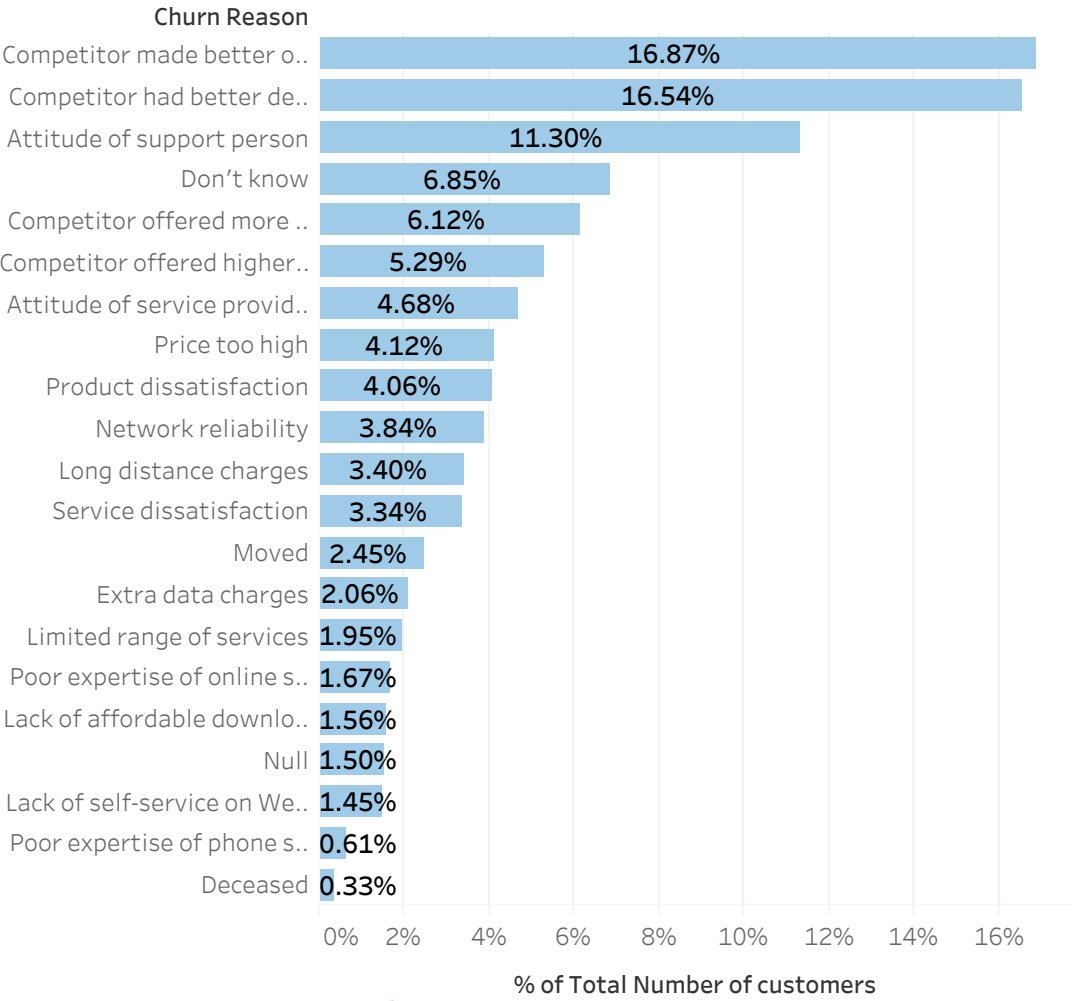
Overview KPIs

Of Customers
6,687

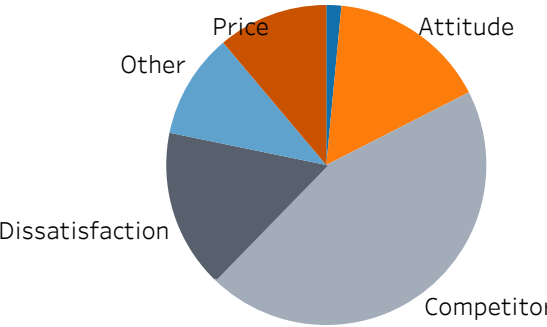
Of Churned Customers
1,796

Churn Rate
26.86%

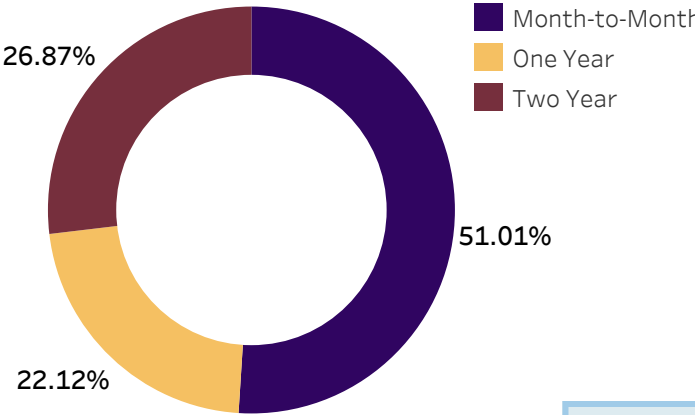
Churn Reasons Analysis



Churn by Category



Customers by contract



Churn Category

- ☒ Null
- ☒ Attitude
- ☒ Competitor
- ☒ Dissatisfaction
- ☒ Other
- ☒ Price

Contract Type

- ☒ Month-to-Month
- ☒ One Year
- ☒ Two Year

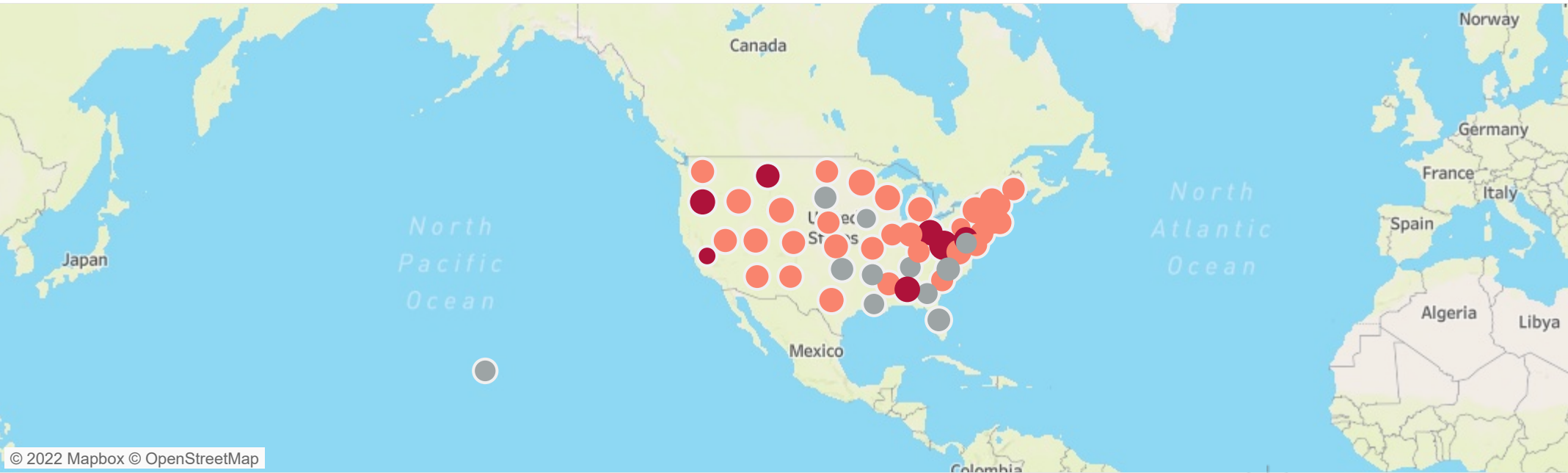
State

All

Churn Range

0.00 57.00

Churn Rate By State



Feel Free To use the 4 Dashboards to deep dive into any question related to the Business Case or contact me at amiribrahimtag@gmail.com

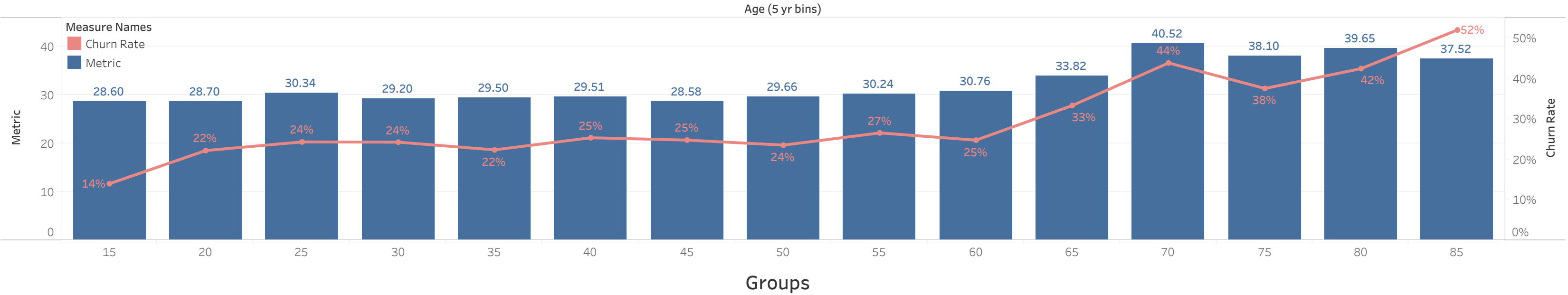


Churn Analysis

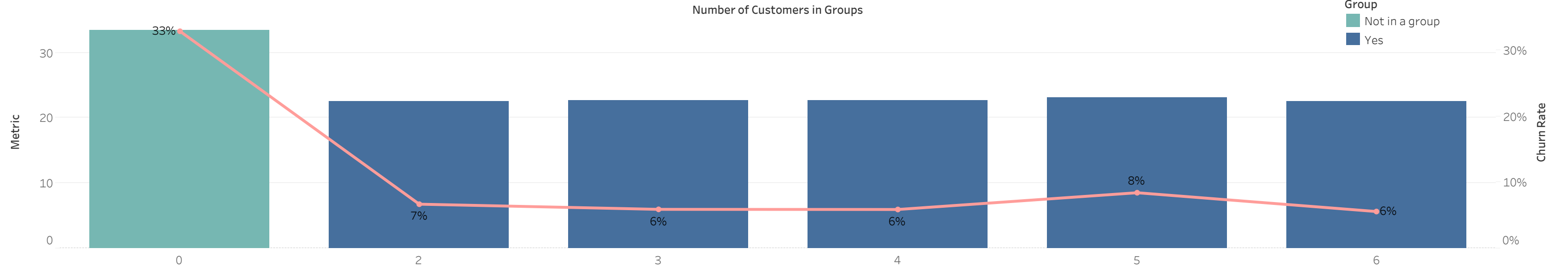
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Pick Metric	Avg Monthly Charge	Contract Type	Churn Category	Payment Method	Unlimited Data Plan	Intl Plan	Group	Account Length (in months)
		All	All	All	All	All	All	All values

Age Brackets



Groups

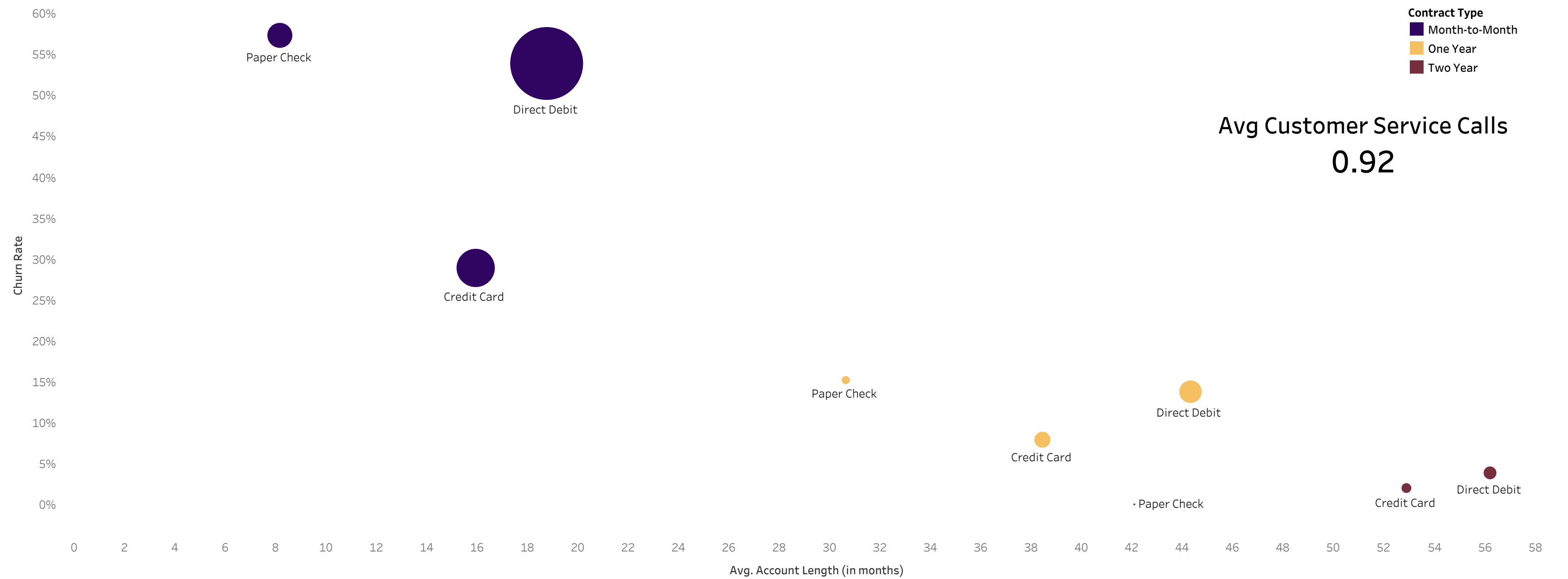


Churn Analysis

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Payment Method	Contract Type	Churn Category	Unlimited Data Plan	Intl Plan	Account Length (in months)
All	All	All	All	All	All values

Contract Type



Avg Customer Service Calls
0.92

Churn Analysis

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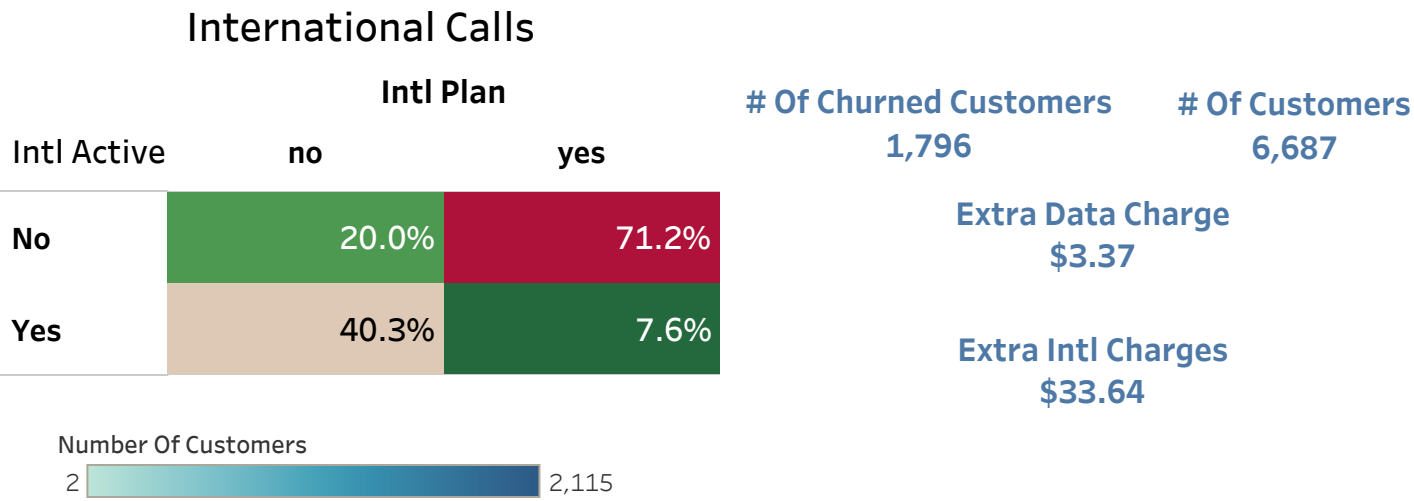
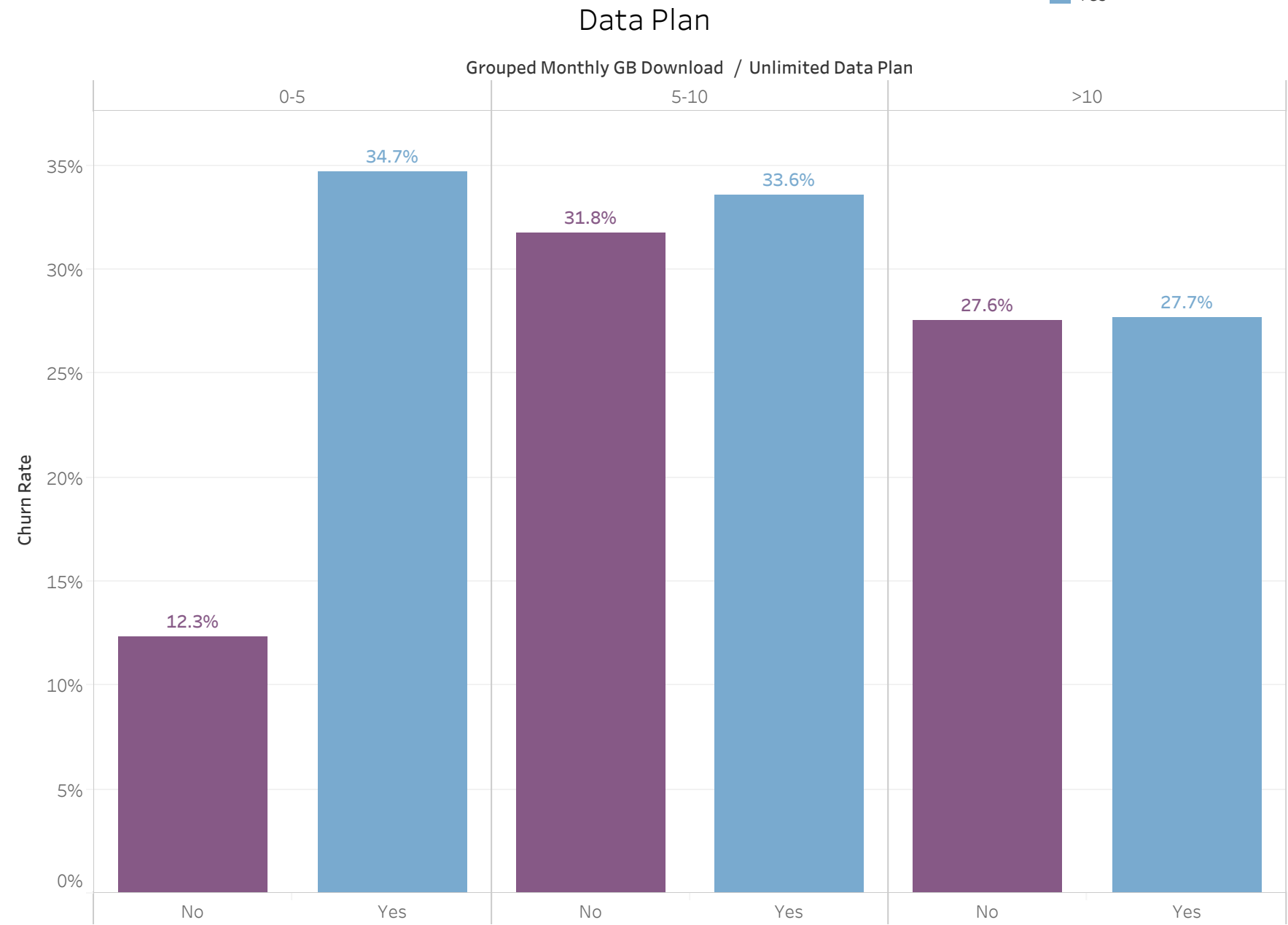
All	Contract Type	All	Unlimited Data Plan	All	Payment Method	All	Intl Plan	Gender	All	Senior	All
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The Data and International graphs can be used as filters

Unlimited Data Plan

No

Yes



Exploring Demographics

		Gender			Grand Total
Senior	Under 30	Female	Male	Prefer not to say	
No	No	2,055 24.7%	2,115 24.7%	3 33.3%	4,173 24.7%
	Yes	651 24.3%	634 21.6%	2 50.0%	1,287 23.0%
Yes	No	595 38.8%	630 37.8%	2 0.0%	1,227 38.2%
Grand Total		3,301 27.2%	3,379 26.5%	7 28.6%	6,687 26.9%

Churn Analysis

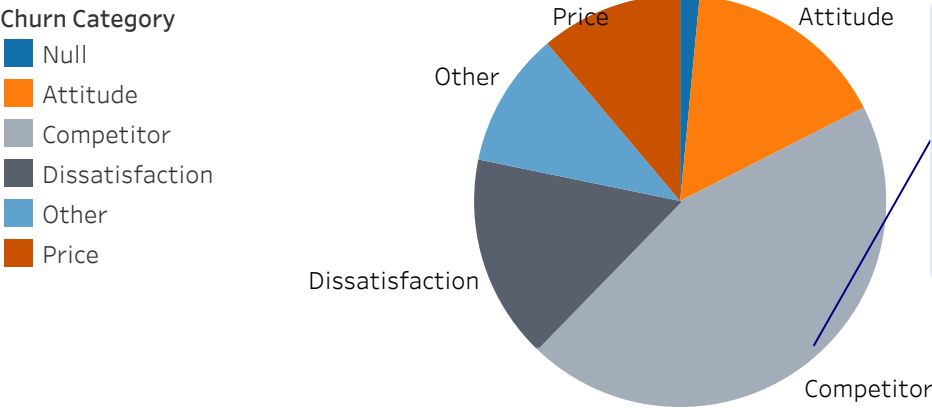
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Question 1

The average churn rate for Databel is ~27% It is considered a high rate so we need to explore more to understand.

Churn Rate
26.86%

Churn by Category



Question 2

Churn Category: **Competitor**
% of Total Churned : 44.82%
Customers Churned: 805
Almost half of all customers churning are related to the competitor category

Exploring Demographics

		Gender			Grand Total
Senior	Under 30	Female	Male	Prefer not to say	
No	No	2,055 24.7%	2,115 24.7%	3 0.0%	4,173 24.7%
	Yes	651 24.3%	634 21.6%	2 0.0%	1,287 23.0%
Yes	No	595 38.8%	630 37.8%	2 0.0%	1,227 38.2%
	Yes	2 0.0%	2 0.0%	2 0.0%	6 0.1%
Grand Total		3,301 27.2%	3,379 26.5%	7 28.6%	6,687 26.9%

Gender: All
Senior: Yes
Under 30: No
N of customers: 1,227
Churn Rate: 38.2%

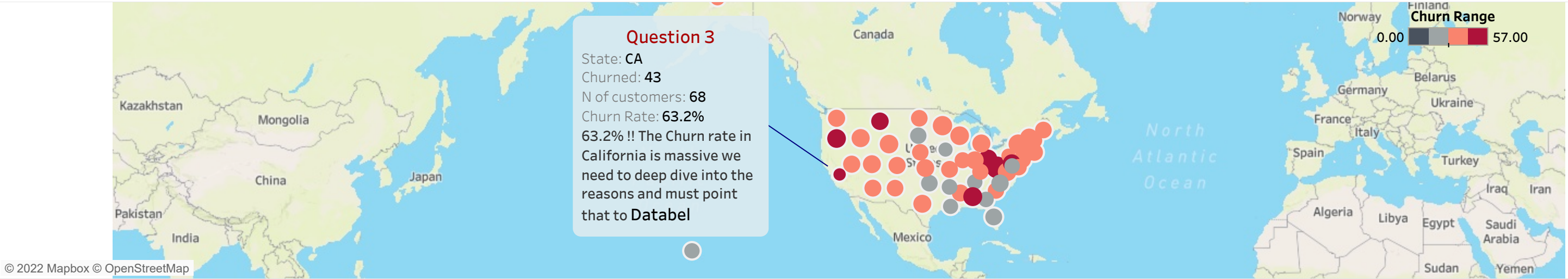
Question 4

Senior Citizens Churn rate ~38% is around 10% higher than the average churn rate for the company, its significantly high so further analysis is a must.

Churn Rate By State

Question 3

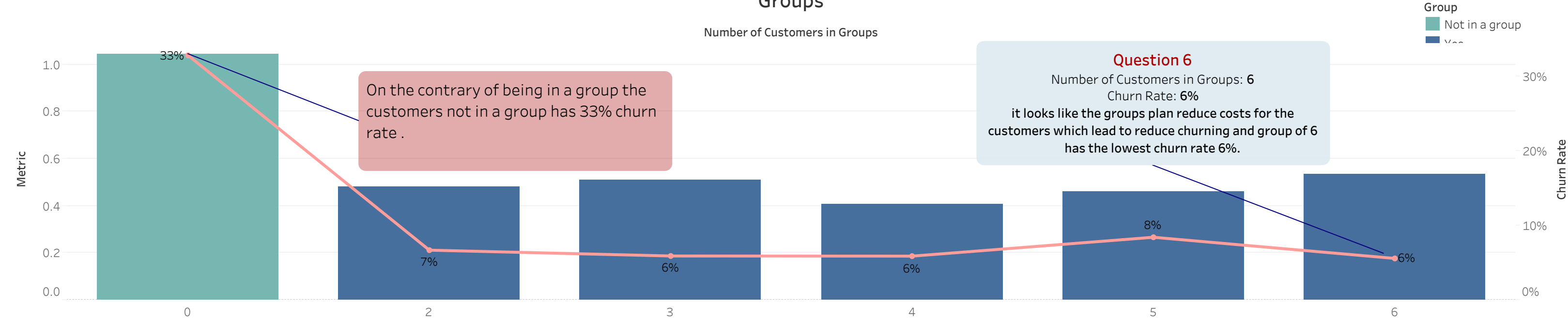
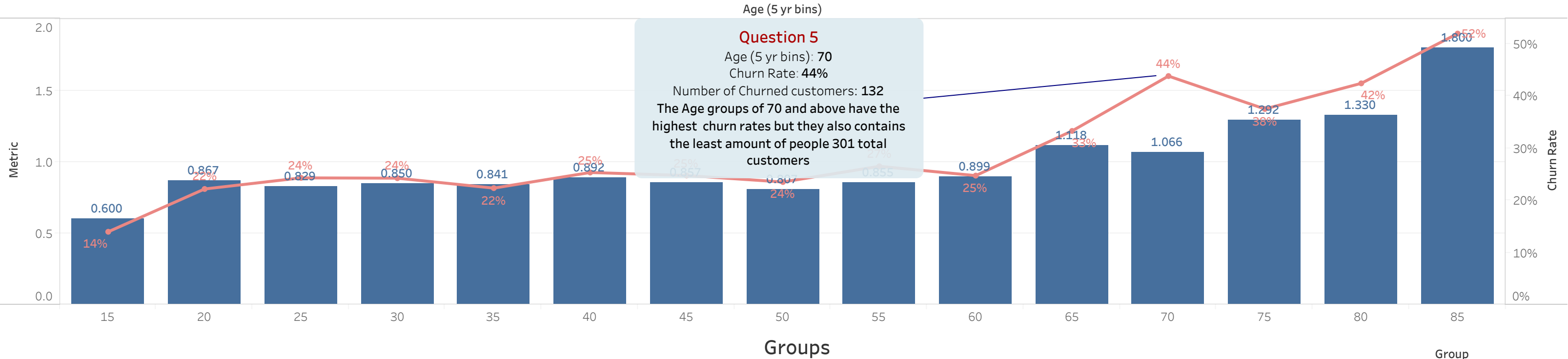
State: CA
Churned: 43
N of customers: 68
Churn Rate: 63.2%
63.2% !! The Churn rate in California is massive we need to deep dive into the reasons and must point that to Databel



Churn Analysis

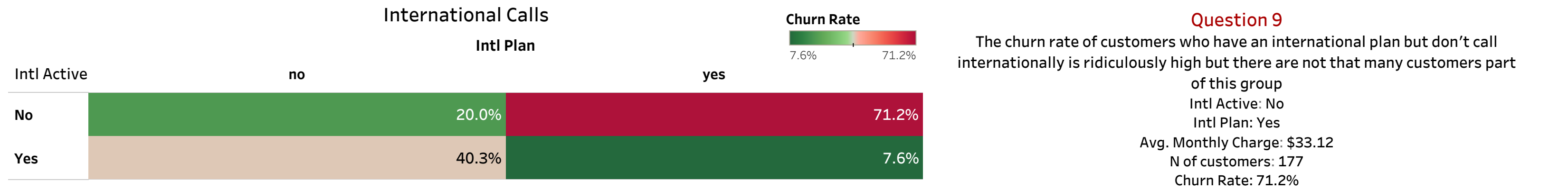
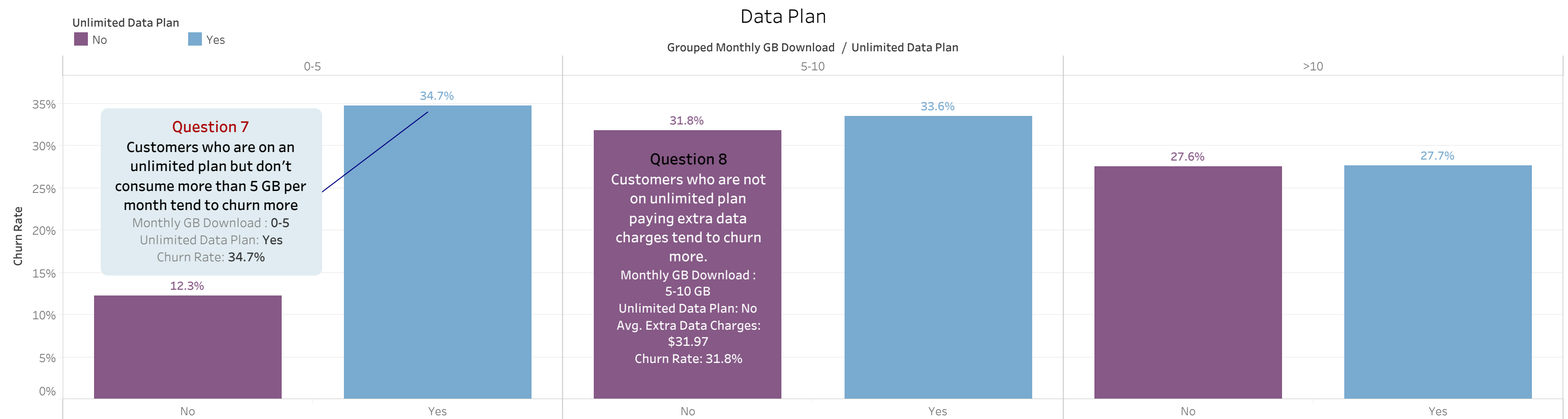
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Age Brackets



Churn Analysis

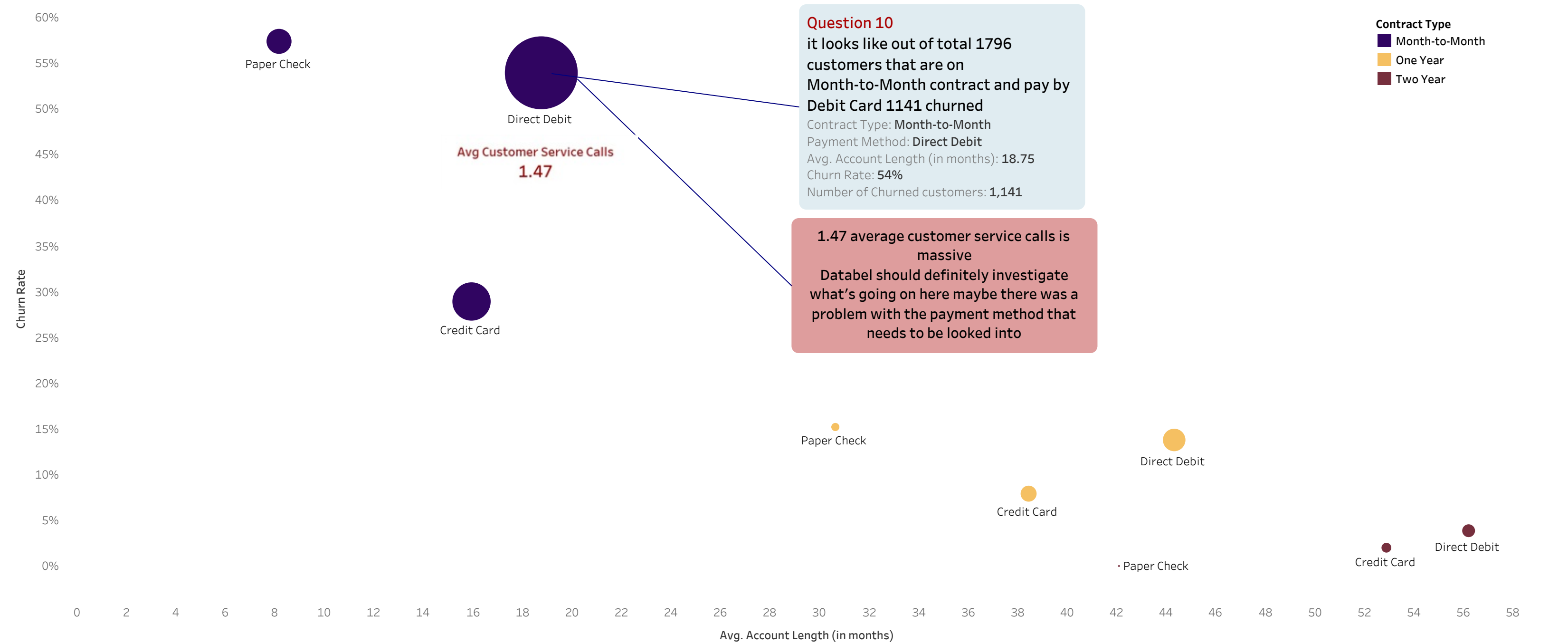
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Contract Type



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Conclusion & Findings



- **The logical next step is to investigate the reasons for almost half of company's customers churning for it's competitors (what are they offering more than Databel ? is it cheaper plans or extra usage of GBs) .**
- **Competitors launched aggressive promos in certain states an example of that is 64% churn rate in California so Databel should start deepdive analysis in these states .**
- **Customers aged +60 tend to churn and +70 customers have the highest churn rate but they also contain the least amount of people.**
- **As we inspected group contracts we found that monthly charges is lower for people who are in the same group of 2 or more thats a strength point for Databel and the group size of 6 people has the lowest churn rate , Databel should increase their offers in that field.**
- **As we analyzed the international activity of customers and its relationship to churn we found that the behavior of customers who pay for an international plan but don't call internationally is skyhigh so Databel should contact these group of customers to propose them to downgrade their plan instead of losing them later .**
- **As we analyzed contract types we found that Month-to-Month contract and Direct Debit payment method have +50% churn rate with 1.47 average customers service calls we advice Databel to check if there is a problem with that payment method.**
- **Lastly on our analysis pushing customers to a one or two year contract is a great way to reduce churn.**

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