Data analysis on StoreData
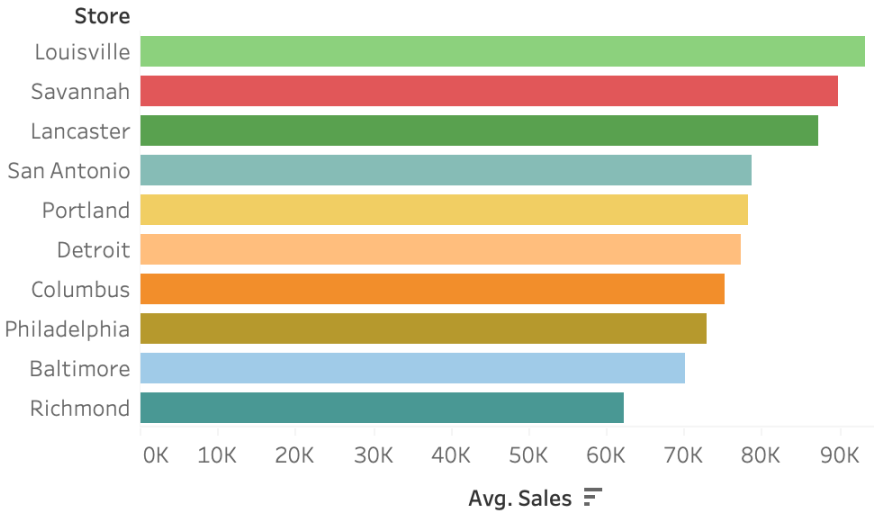
by

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13.09.23

Sales overview

1. The stores are located within the same geographical area that has fixed Macro ecomomical effect.
2. All the stores seem to sell similar products, that's why bigger stores with higher number of employees tends to sell more products.
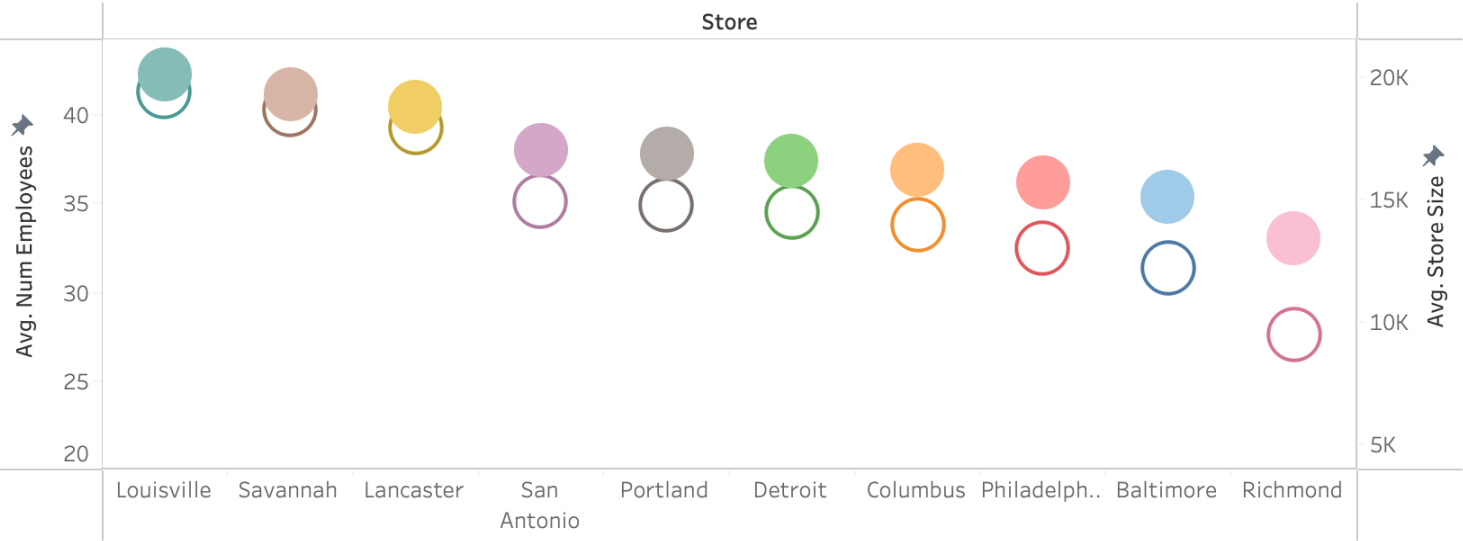
Macro economics per store

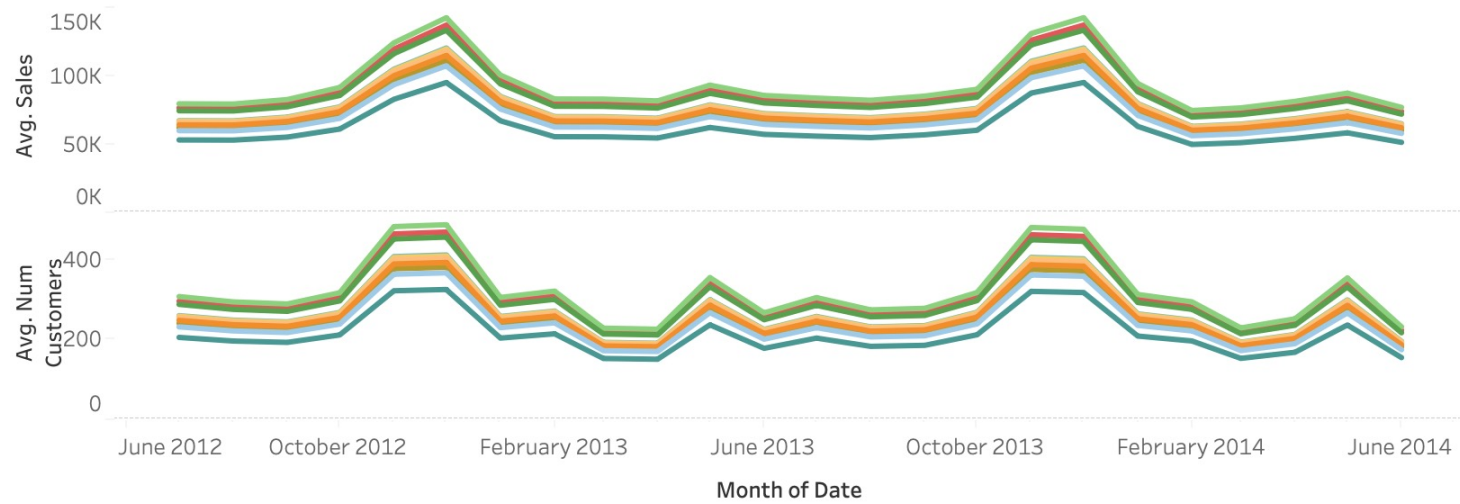| Store	Avg. Econ ChangeGDP	Avg. Econ Jobs Chan..	Annualized CPI
Baltimore	1.8	-590.7	0.5
Columbus	1.8	-590.7	0.5
Detroit	1.8	-590.7	0.5
Lancaster	1.8	-590.7	0.5
Louisville	1.8	-590.7	0.5
Philadelphia	1.8	-590.7	0.5
Portland	1.8	-590.7	0.5
Richmond	1.8	-590.7	0.5
San Antonio	1.8	-590.7	0.5
Savannah	1.8	-590.7	0.5

Store size & employee count

Sales wrt Time

1. Sales and customer volume correlates strongly.
2. The stores hire additional temporary employyes during the peak sales times - hypothesis: This stores sells products that needs support of sales person.
3. The sales increases significantly during holiday seasons - Christmas, Black Friday sale (Nov) - some sales also happen in Summer during July.

Sales & Customers over time

No of emps by Store

Store
- Baltimore
- Columbus
- Detroit
- Lancaster
- Louisville
- Philadelphia
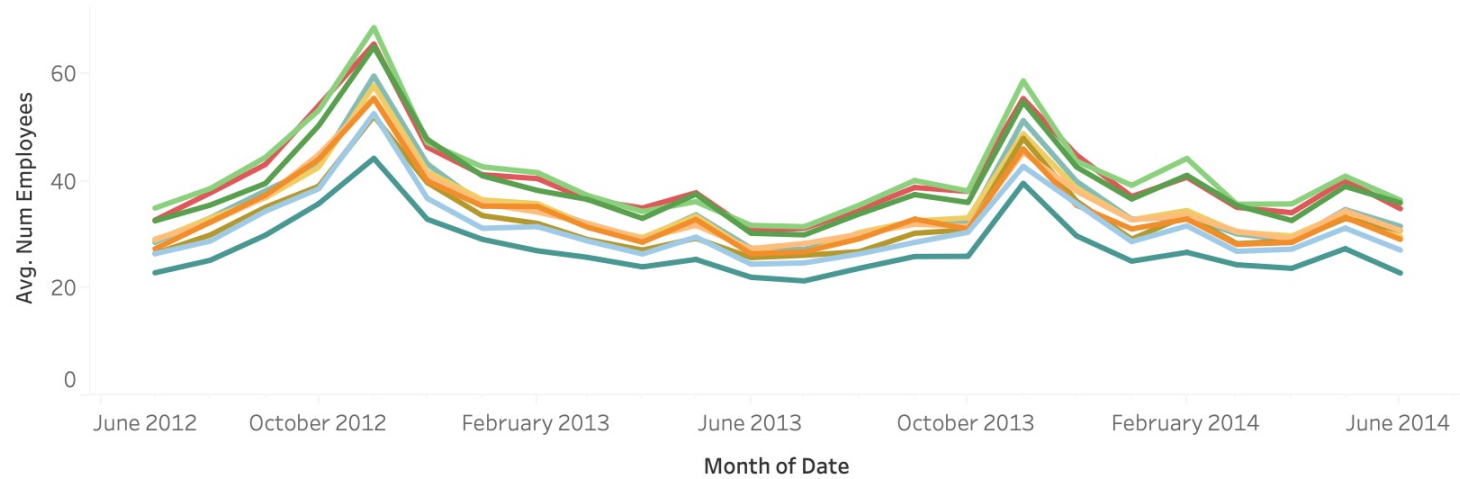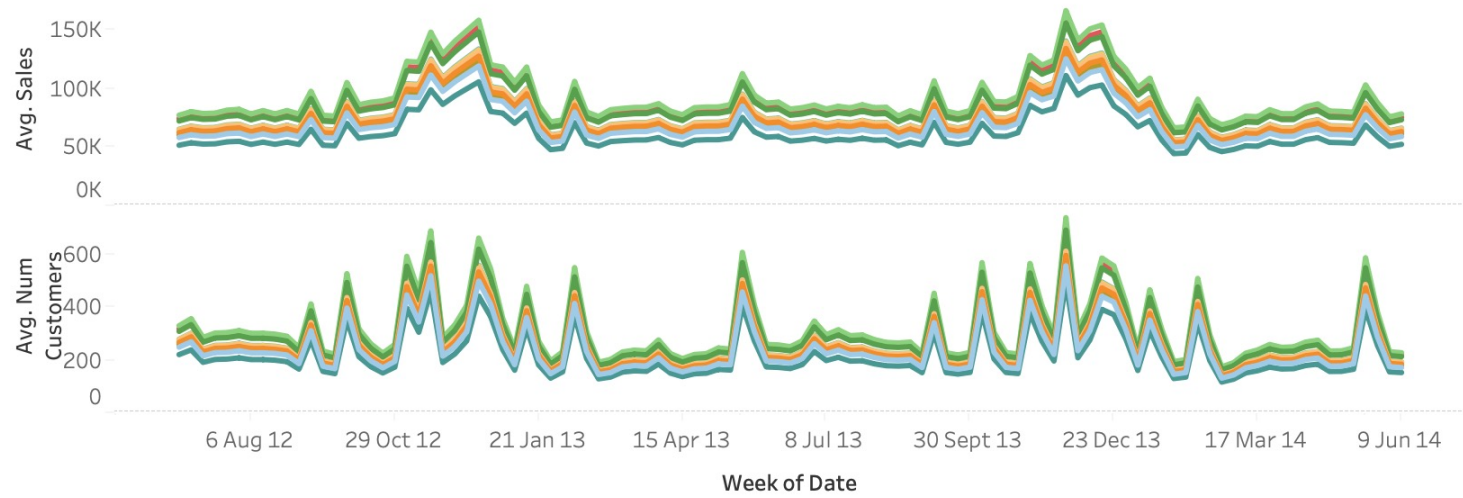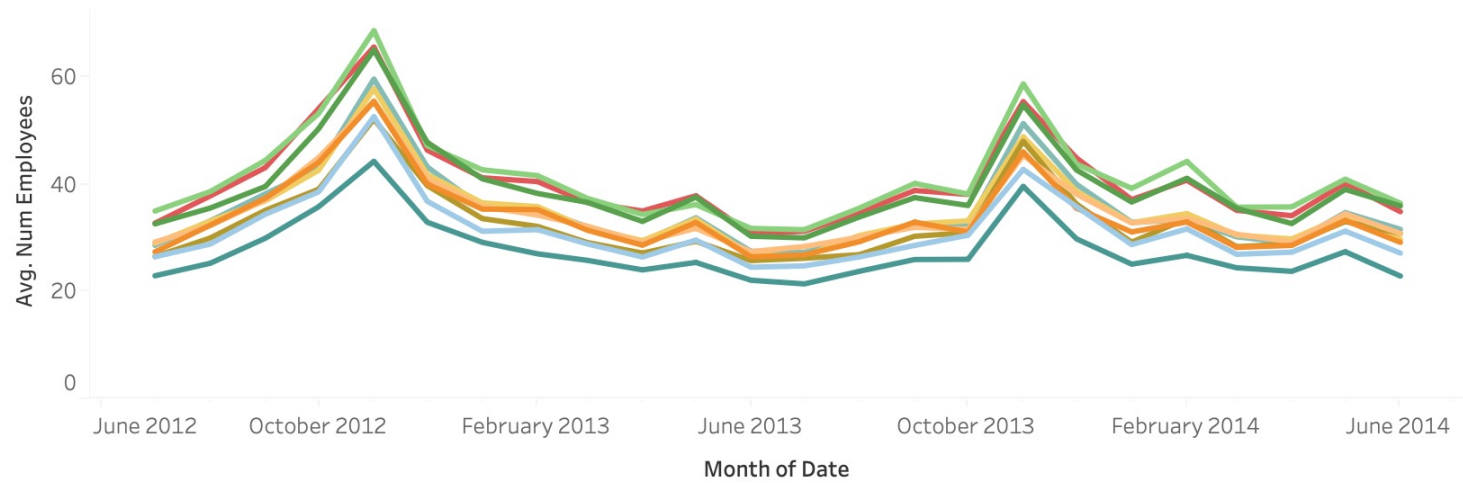- Portland
- Richmond
- San Antonio
- Savannah

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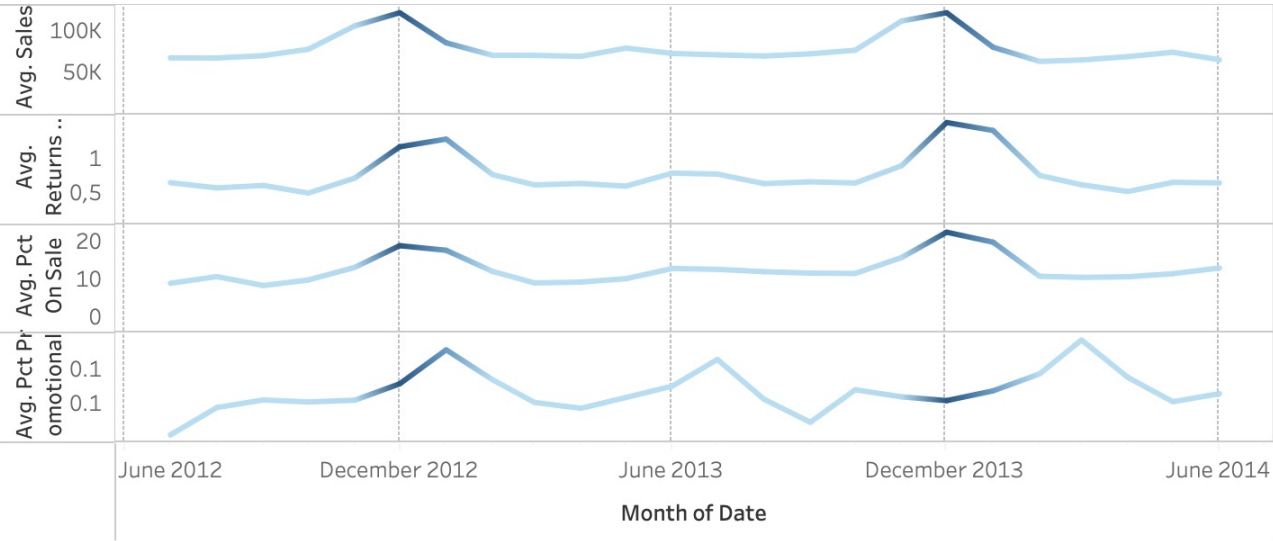
Sales & Customers over time

No of emps by Store

Store
- Baltimore
- Columbus
- Detroit
- Lancaster
- Louisville
- Philadelphia
- Portland
- Richmond
- San Antonio
- Savannah

Sales with seasonality & marco economics

1. Black Friday and Christmas (Nov & Dec) months outperform all other months in terms of sales.
2. The macro economics do not seem to affect the sales on the first look.

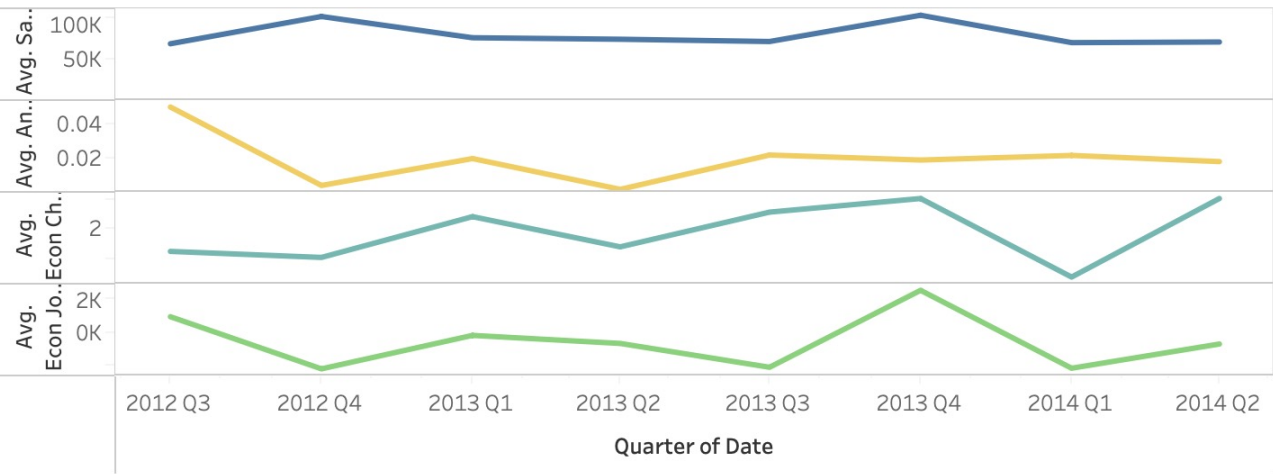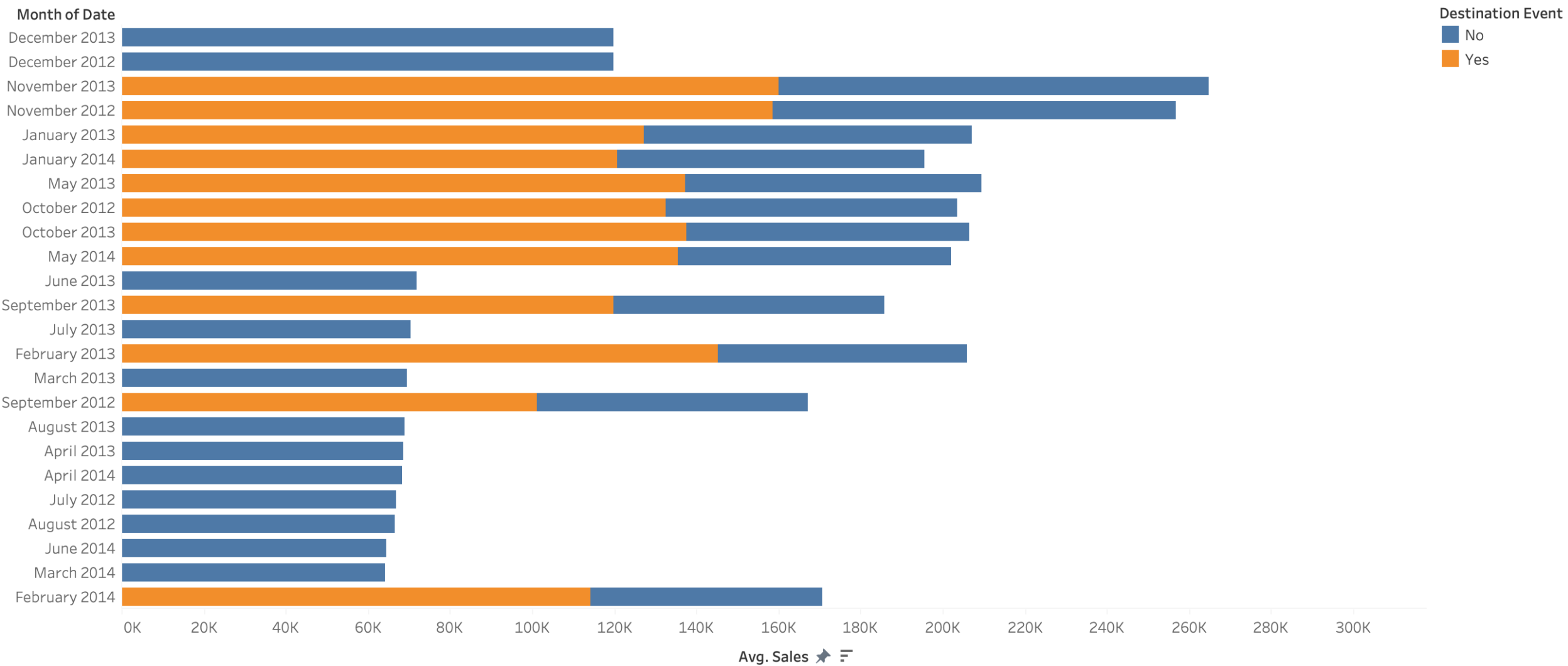### Sales vs Returns vs Pct Promotions Correlation

Sales vs Macro ecomonics correlation

BlackFriday & Chistmas vs Avg sale

Yea..

2012

83,592 No
104,859 Yes

2013

79,812 No
96,877 Yes

2014

61,380 Yes
69,315 No
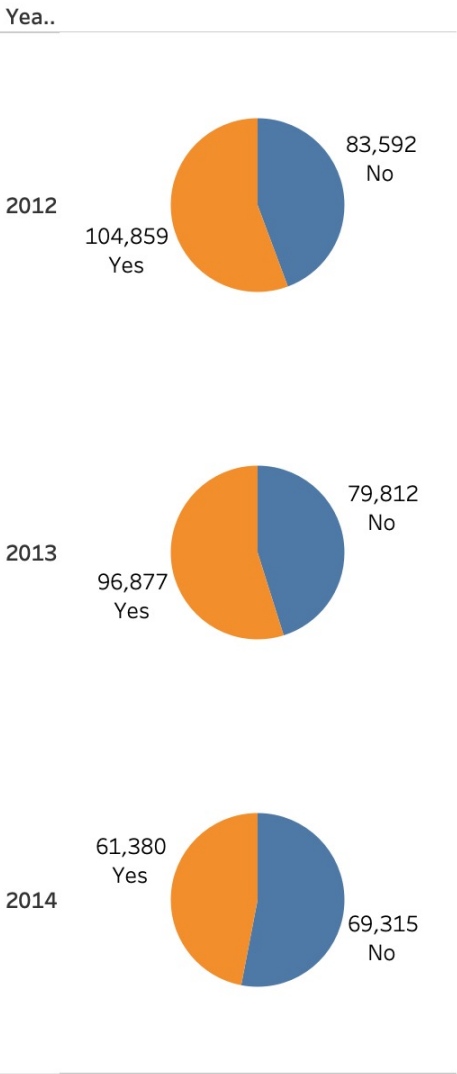
Destimation events on sales

Month of Date

Destination Event
- No (blue)
- Yes (orange)

Month of Date	Avg. Sales
December 2013	~120K (No)
December 2012	~120K (No)
November 2013	~265K (Yes ~160K, No)
November 2012	~258K (Yes ~158K, No)
January 2013	~207K (Yes ~127K, No)
January 2014	~195K (Yes ~120K, No)
May 2013	~208K (Yes ~137K, No)
October 2012	~203K (Yes ~132K, No)
October 2013	~206K (Yes ~138K, No)
May 2014	~202K (Yes ~135K, No)
June 2013	~72K (No)
September 2013	~186K (Yes ~120K, No)
July 2013	~70K (No)
February 2013	~206K (Yes ~145K, No)
March 2013	~70K (No)
September 2012	~168K (Yes ~101K, No)
August 2013	~69K (No)
April 2013	~69K (No)
April 2014	~69K (No)
July 2012	~67K (No)
August 2012	~67K (No)
June 2014	~65K (No)
March 2014	~64K (No)
February 2014	~170K (Yes ~113K, No)

Avg. Sales

Average of Sales for each Date Month. Color shows details about Destination Event. The data is filtered on Store, which keeps multiple members.