Data Description:

Columns

CustKey-- Customer Billing ID
DateKey--Date of billing
Discount Amount-- Total amount of discount provided to customer
Invoice Date-- Date of bill
Invoice Number--Bill Number
Item Class--group of items that share similar attributes.
Item Number-- number associated with items similar to barcode
Item-- Name of Item
Line Number--Line number in which the item is kept
List Price--price at which the manufacturer recommends that the retailer sell the product.
Order Number--a number identifying a purchase or order placed by a customer.
Promised Delivery Date--The date promised for delivery of order
Sales Amount- the amount received from customer
Sales Amount Based on List Price--Total billing amount based on list price of items
Sales Cost Amount-- accumulated total of all costs used to create a product or service, which has been sold
Sales Margin Amount--the amount a company makes from a sale of a service or product.
Sales Price-- the discounted price at which goods or services are being sold.
Sales Quantity--T the number of units that are sold in a given time period
Sales Rep
'U/M--Unit of item that is purchased

Data Types

CustKey	float64
DateKey	object
Discount Amount	float64
Invoice Date	object
Invoice Number	float64
Item Class	object
Item Number	object
Item	object
Line Number	float64
List Price	float64
Order Number	float64
Promised Delivery Date	object
Sales Amount	float64
Sales Amount Based on List Price	float64
Sales Cost Amount	float64
Sales Margin Amount	float64
Sales Price	float64

Sales Quantity	float64
Sales Rep	float64
U/M	object

Data information

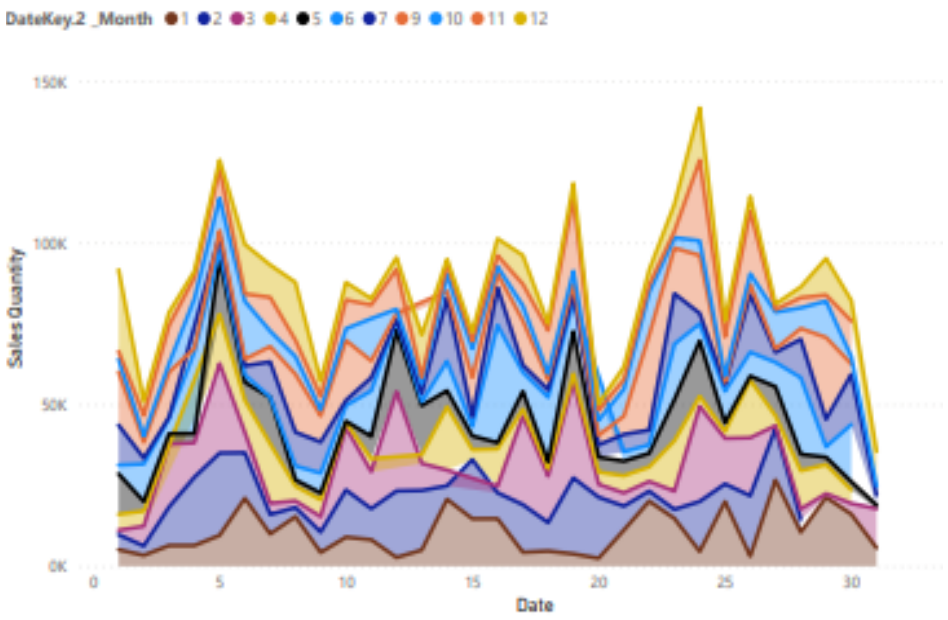
	CustKey	Discount Amount	Invoice Number	Line Number	List Price	Order Number	Sales Amount	Sales Amount Based on List Price	Sales Cost Amount	Sales Margin Amount
count	6.528200e+04	65280.000000	65282.000000	65282.000000	65282.000000	65282.000000	65282.000000	65282.000000	65282.000000	65282.000000
mean	1.001770e+07	1855.574835	216223.662020	23713.849790	514.693380	180583.064352	2852.038373	4707.473613	1660.979228	1191.059145
std	7.176148e+03	9037.140888	94992.281866	32664.024053	449.189182	67593.871116	15164.342107	20696.443785	9556.485250	5860.787502
min	1.000045e+07	-255820.800000	100012.000000	1000.000000	0.000000	100838.000000	200.010000	0.000000	0.000000	-3932.930000
25%	1.001272e+07	246.037500	117931.000000	3000.000000	181.560000	115321.000000	308.387500	561.040000	167.790000	129.950000
50%	1.001966e+07	441.760000	222869.500000	12000.000000	325.190000	203702.000000	553.940000	998.160000	304.500000	246.490000
75%	1.002351e+07	999.760000	314318.750000	32000.000000	803.860000	218576.000000	1280.042500	2315.040000	687.320000	579.530000
max	1.002758e+07	343532.660000	332842.000000	344000.000000	2760.700000	321532.000000	555376.000000	632610.160000	366576.000000	188800.000000

Sales Price	Sales Quantity	Sales Rep
55281.000000	65282.000000	65282.000000
283.615913	45.084311	137.422398
252.876719	429.661793	26.643936
-5000.000000	-1.000000	103.000000
100.070000	2.000000	113.000000
183.757500	3.000000	134.000000
448.220000	8.000000	160.000000
6035.000000	16000.000000	185.000000

Trend Analysis:

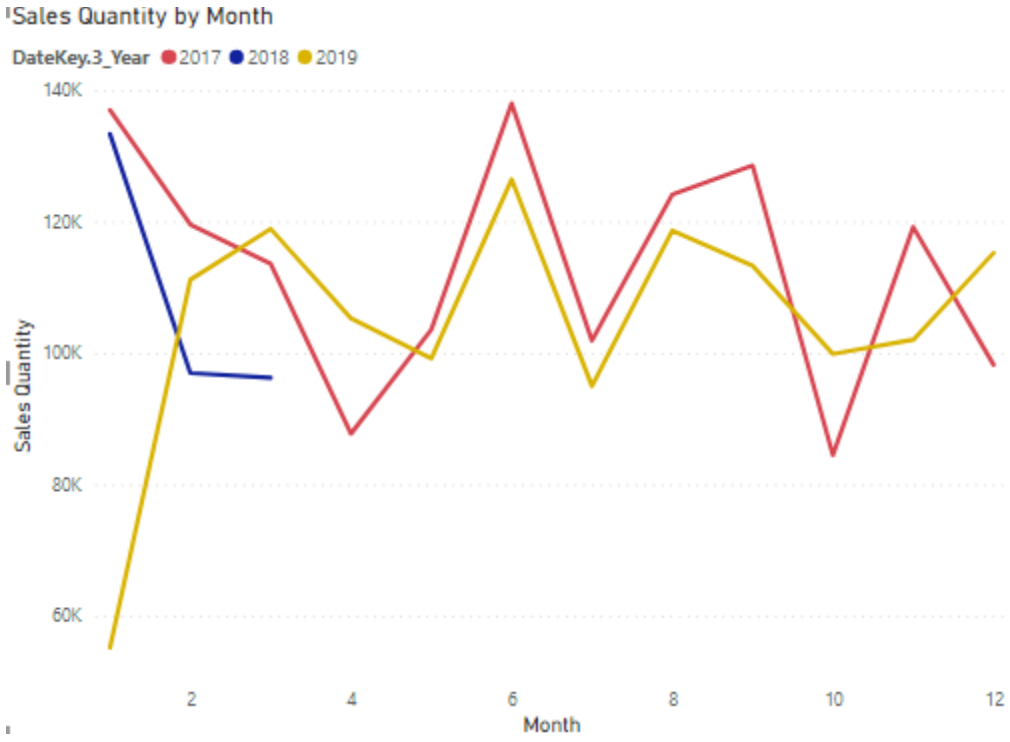
Total sales of 2017-19

Total quantity sold in three years

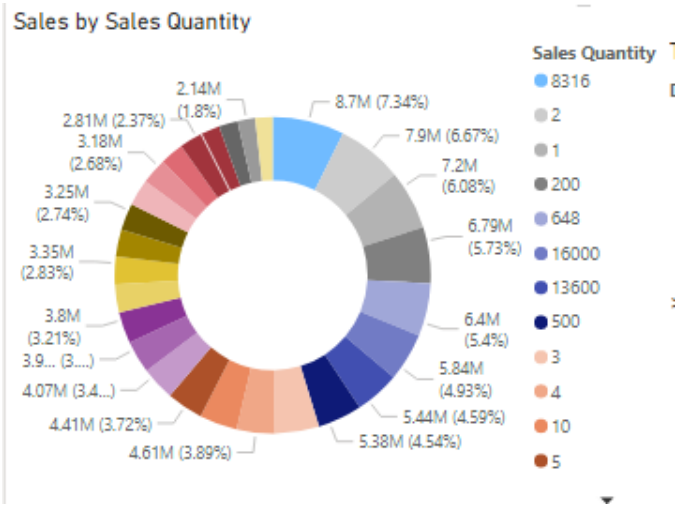


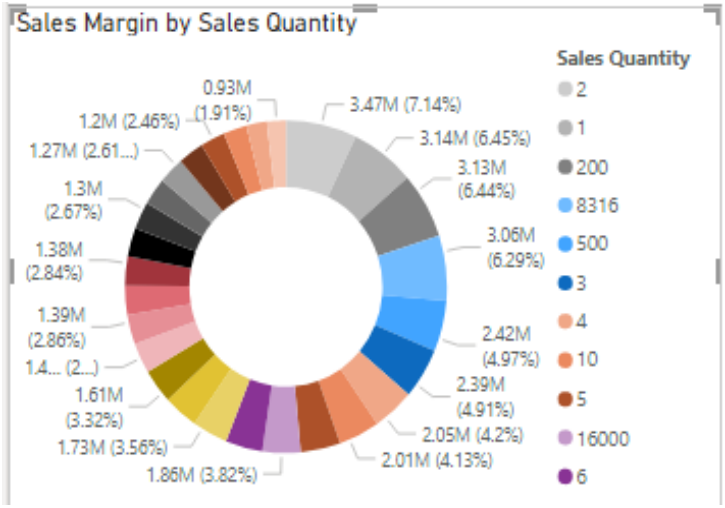
Here, we see that in between the date of 3-10 and 20-25 of each month the sales quantity purchased are higher

In this period we can either increase the sales margin on items that are purchased frequently or provide more offers on item that are not high in demand (has low sales)



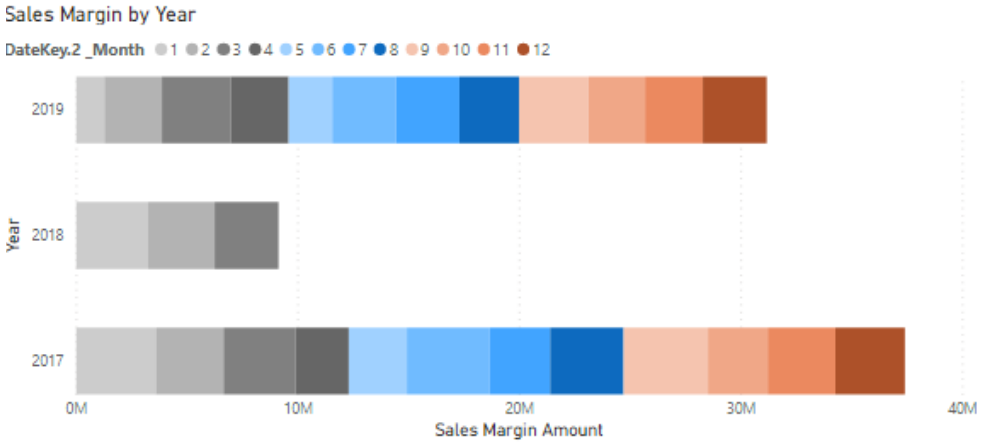
Here,The data for 2018 after march is not available because of which we cannot infer much but based of 2017-19 we can say that in May-June quantity purchased increased then from June to July the quantity purchased decreased then again increased till August and then witnessed lowest quantity of 2017 in october

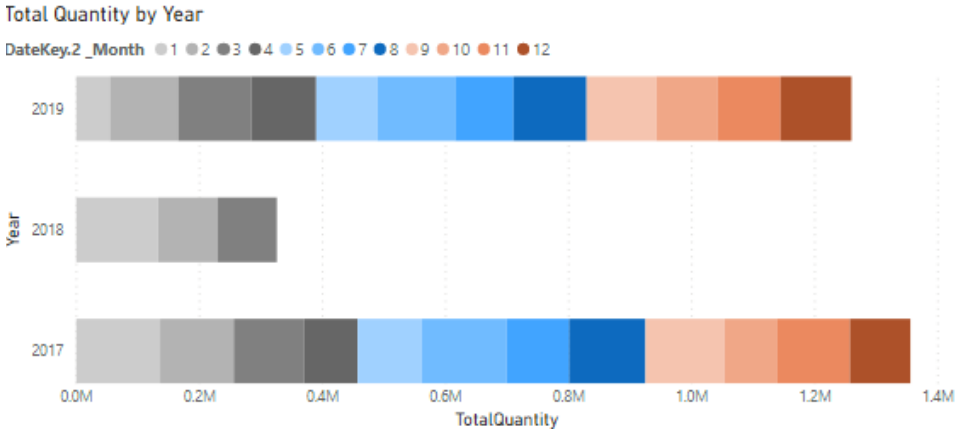




We tend to believe that higher the quantity higher will be the profit
but here the sale of 8316 is highest but profit is highest for two quantities
Here, we can decide whether we want to increase sales or profit and use the information accordingly
To increase profit provide offer on quantity of items that give higher margin

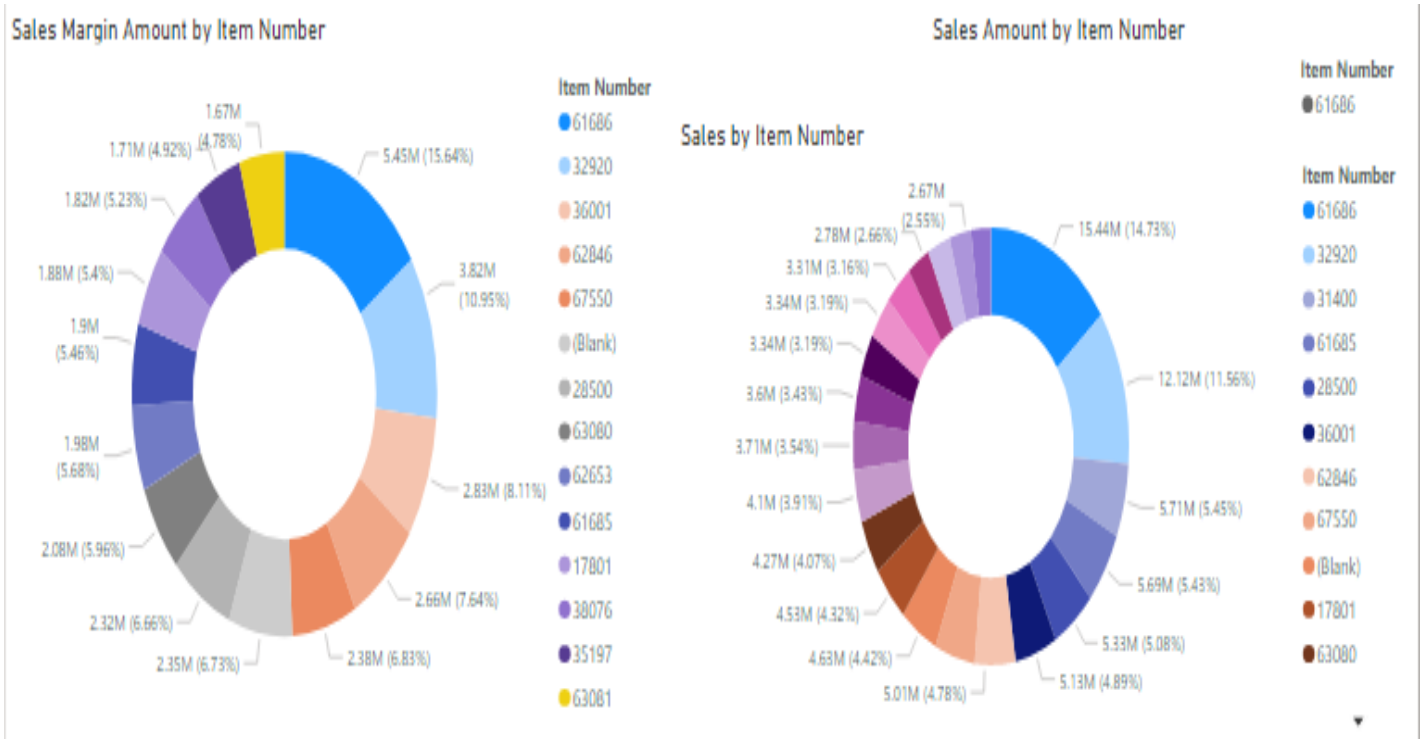
We can also focus on the quantities that are outliers and do planning for better sales





Here the items were in demand in first quarter of each year and also highest in 2017

Here data for sales greater than 2400000 is shown
data for sales margin greater than 1600000 is shown



Here we see that profit of Item number 618686 is highest with high sales whereas 36001 has higher sales margin but lower sales. We can associate high margin with items that have high sales or items which has lower sales but has higher margin can be kept in front oto get customer attention