Interaktyvi pelno ataskaita su Power BI, naudojant „NovaTech Dynamics” finansinius duomenis. (aprašymas)

1. Duomenų apžvalga

- Gavau įmonės finansinių operacijų duomenis ir juos nukroviau į Excel formatą.

- Tuomet peržiūrėjau operacijų žurnalą kuriam buvo virš 3000 operacijų, be pateiktą sakaitų planą (COA – *chart of accounts*).

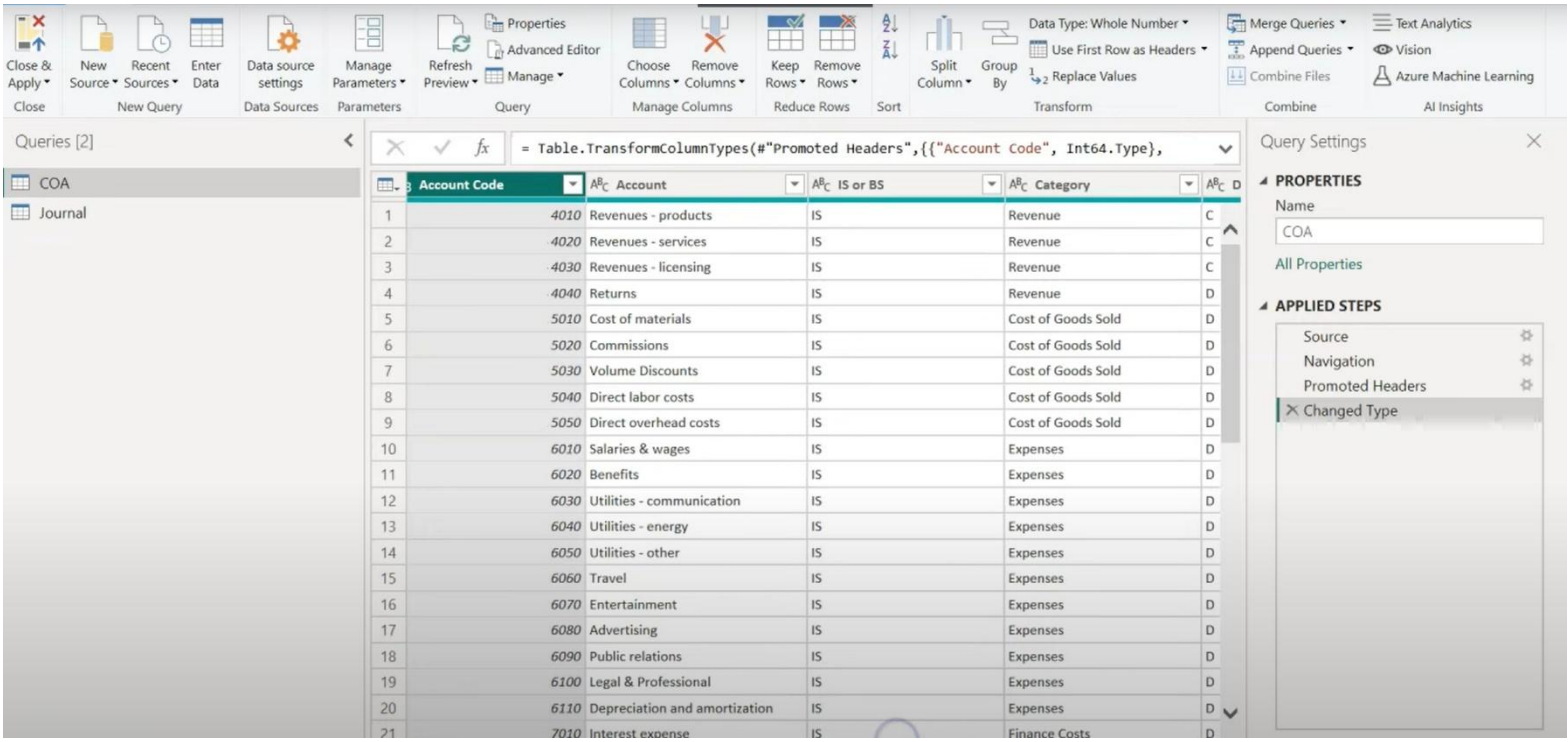
	A	B	C	D	E	F
1	Date	Division	Description	Dr	Cr	Amount
2	1-Jan-19	South	Transaction 1	Cash	Revenues - services	18193.219
3	1-Jan-19	East	Transaction 2	Volume Discounts	Cash	364
4	1-Jan-19	East	Transaction 3	Cash	Interest income	8463
5	1-Jan-19	West	Transaction 4	Cash	Interest income	10100
6	2-Jan-19	North	Transaction 5	Legal & Professional	Cash	6600
7	2-Jan-19	North	Transaction 6	Volume Discounts	Cash	312
8	2-Jan-19	North	Transaction 7	Cash	Interest income	376
9	3-Jan-19	East	Transaction 8	Utilities - communication	Cash	6775.153
10	3-Jan-19	North	Transaction 9	Utilities - communication	Cash	5698.5
11	3-Jan-19	West	Transaction 10	Public relations	Cash	23.941
12	3-Jan-19	West	Transaction 11	Entertainment	Cash	19460
13	3-Jan-19	West	Transaction 12	Utilities - communication	Cash	1904
14	3-Jan-19	West	Transaction 13	Direct overhead costs	Cash	3650.4
15	4-Jan-19	North	Transaction 14	Volume Discounts	Cash	11680
16	4-Jan-19	South	Transaction 15	Salaries & wages	Cash	1592.8
17	4-Jan-19	South	Transaction 16	Entertainment	Cash	270
18	4-Jan-19	South	Transaction 17	Legal & Professional	Cash	13.6
19	4-Jan-19	South	Transaction 18	Legal & Professional	Cash	2296.2422
20	4-Jan-19	East	Transaction 19	Advertising	Cash	10.906
21	4-Jan-19	West	Transaction 20	Salaries & wages	Cash	4920
22	5-Jan-19	North	Transaction 21	Commissions	Cash	2136.9344
23	5-Jan-19	North	Transaction 22	Utilities - communication	Cash	2474.0716
24	5-Jan-19	North	Transaction 23	Cash	Revenues - services	24418.4
25	5-Jan-19	North	Transaction 24	Depreciation and amortization	Accumulated Depreciation	2957.6288
26	5-Jan-19	South	Transaction 25	Utilities - communication	Cash	202
27	5-Jan-19	South	Transaction 26	Advertising	Cash	293.7588
28	5-Jan-19	South	Transaction 27	Cash	Revenues - products	83882.8536
29	5-Jan-19	South	Transaction 28	Cash	Revenues - products	98581.544
30	6-Jan-19	South	Transaction 29	Entertainment	Cash	8.5116
31	6-Jan-19	South	Transaction 30	Salaries & wages	Cash	6879.555
32	6-Jan-19	East	Transaction 31	Depreciation and amortization	Accumulated Depreciation	954.6
33	6-Jan-19	West	Transaction 32	Utilities - other	Cash	2537.975
34	6-Jan-19	West	Transaction 33	Depreciation and amortization	Accumulated Depreciation	2966.72
35	7-Jan-19	South	Transaction 34	Utilities - other	Cash	14.75
36	7-Jan-19	South	Transaction 35	Public relations	Cash	11.554
37	7-Jan-19	East	Transaction 36	Cash	Interest income	10137.327
38	7-Jan-19	East	Transaction 37	Entertainment	Cash	18.3
39	7-Jan-19	West	Transaction 38	Utilities - energy	Cash	5162.9611
40	8-Jan-19	North	Transaction 39	Commissions	Cash	328
41	8-Jan-19	South	Transaction 40	Interest expense	Cash	12.852
42	8-Jan-19	West	Transaction 41	Interest expense	Cash	12.672
43	9-Jan-19	North	Transaction 43	Cash	Revenues - services	14248.8196
44	9-Jan-19	South	Transaction 44	Utilities - other	Cash	1174.2
45	9-Jan-19	East	Transaction 45	Depreciation and amortization	Accumulated Depreciation	751.64
46	9-Jan-19	East	Transaction 46	Benefits	Cash	1126.4
47	9-Jan-19	West	Transaction 47	Utilities - other	Cash	8.6
48	9-Jan-19	West	Transaction 48	Entertainment	Cash	7.4
49	9-Jan-19	West	Transaction 49	Advertising	Cash	2975.1117
50	9-Jan-19	West	Transaction 50	Utilities - communication	Cash	4364.2309
51	10-Jan-19	North	Transaction 51	Interest expense	Cash	8.69
52	10-Jan-19	North	Transaction 52	Direct overhead costs	Cash	1290
53	10-Jan-19	East	Transaction 53	Cash	Interest income	11.9412
54	10-Jan-19	East	Transaction 54	Benefits	Cash	83.448
55	11-Jan-19	East	Transaction 56	Interest expense	Cash	11.22

Journal COA +

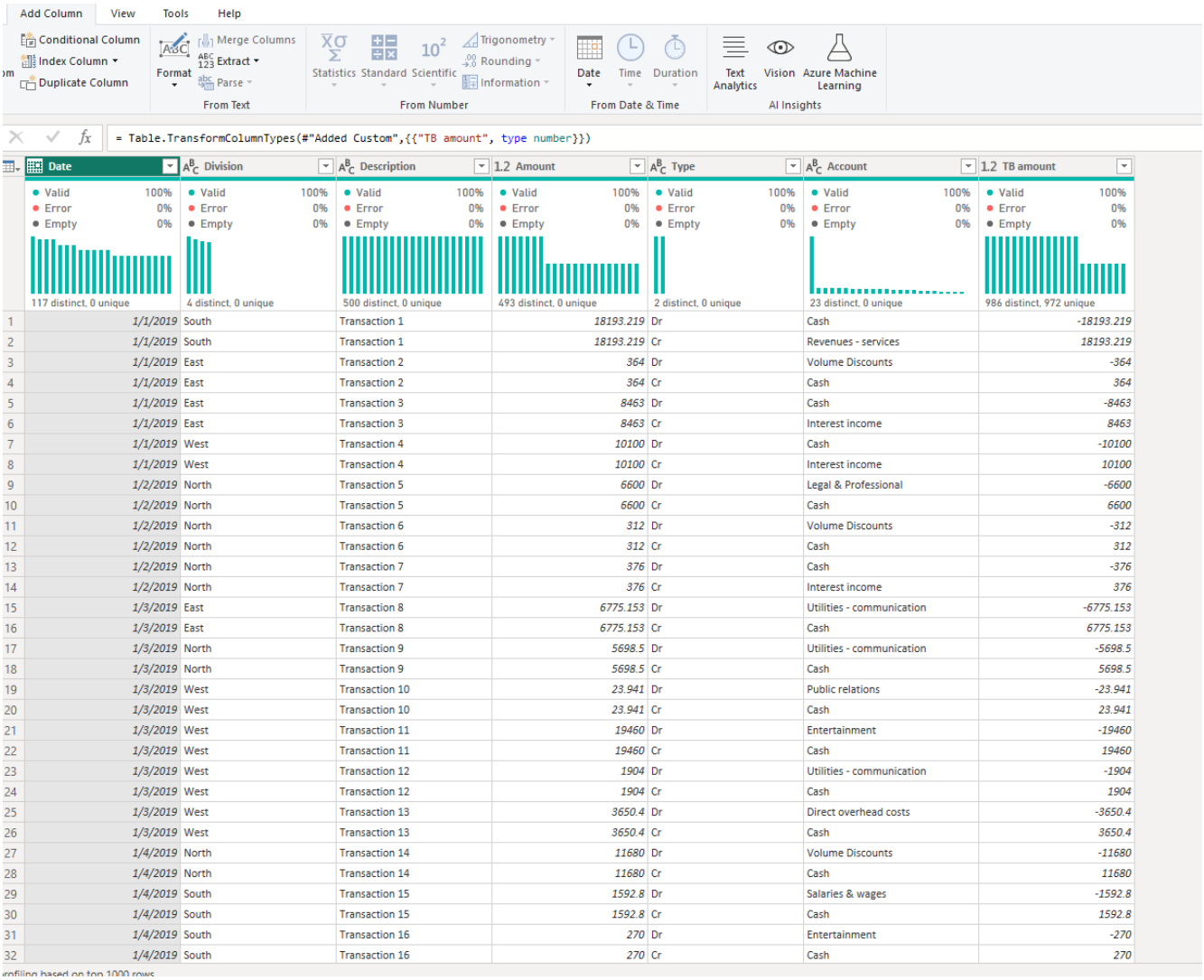
	Account	IS or BS	Category	Debit or Credit	Account Group
4010	Revenues - products	IS	Revenue	C	Revenue
4020	Revenues - services	IS	Revenue	C	Revenue
4030	Revenues - licensing	IS	Revenue	C	Revenue
4040	Returns	IS	Revenue	D	Revenue
5010	Cost of materials	IS	Cost of Goods Sold	D	Cost of Goods sold
5020	Commissions	IS	Cost of Goods Sold	D	Cost of Goods sold
5030	Volume Discounts	IS	Cost of Goods Sold	D	Cost of Goods sold
5040	Direct labor costs	IS	Cost of Goods Sold	D	Cost of Goods sold
5050	Direct overhead costs	IS	Cost of Goods Sold	D	Cost of Goods sold
6010	Salaries & wages	IS	Expenses	D	Salaries, Wages & Benefits
6020	Benefits	IS	Expenses	D	Salaries, Wages & Benefits
6030	Utilities - communication	IS	Expenses	D	Utilities
6040	Utilities - energy	IS	Expenses	D	Utilities
6050	Utilities - other	IS	Expenses	D	Utilities
6060	Travel	IS	Expenses	D	Travel & Entertaining
6070	Entertainment	IS	Expenses	D	Travel & Entertaining
6080	Advertising	IS	Expenses	D	Advertising & PR
6090	Public relations	IS	Expenses	D	Advertising & PR
6100	Legal & Professional	IS	Expenses	D	Legal & Professional
6110	Depreciation and amortizat	IS	Expenses	D	Depreciation and amortization
7010	Interest expense	IS	Finance Costs	D	Net Interest Expense
7020	Interest income	IS	Finance Costs	C	Net Interest Expense
7030	Tax on income	IS	Tax	D	Tax
1010	Cash	BS	Asset	D	Cash & Short Term Investments
1020	Short-term investments	BS	Asset	D	Cash & Short Term Investments
1030	Trade Receivables	BS	Asset	D	Receivables
1040	Other Receivables	BS	Asset	D	Receivables
1050	Allowance for Bad Debts	BS	Asset	C	Receivables
1060	Prepaid Expenses	BS	Asset	D	Prepaid Expenses
1070	Inventory	BS	Asset	D	Inventory
1100	Land & Improvements	BS	Asset	D	Fixed Assets
1110	Buildings & Improvements	BS	Asset	D	Fixed Assets
1120	Machinery & Equipment	BS	Asset	D	Fixed Assets
1130	Office Furniture & Equipme	BS	Asset	D	Fixed Assets
1140	Leasehold Improvements	BS	Asset	D	Fixed Assets
1150	Accumulated Depreciation	BS	Asset	C	Fixed Assets
1160	Other Assets	BS	Asset	D	Other Assets
2030	Accounts Payable	BS	Liability	C	Current Liabilities
2040	Accrued Expenses	BS	Liability	C	Current Liabilities
2050	Other Current Liabilities	BS	Liability	C	Current Liabilities
2060	Long Term Obligations	BS	Liability	C	Long Term Liabilities
2070	Pension Liability	BS	Liability	C	Long Term Liabilities
2080	Other Retirement Benefits	BS	Liability	C	Long Term Liabilities
2090	Other Long Term Liabilities	BS	Liability	C	Long Term Liabilities
2100	Deferred Taxes	BS	Liability	C	Deferred Taxes
3010	Issued Share Capital	BS	Equity	C	Issued Share Capital
3020	Opening Retained Earnings	BS	Equity	C	Opening Retained Earnings

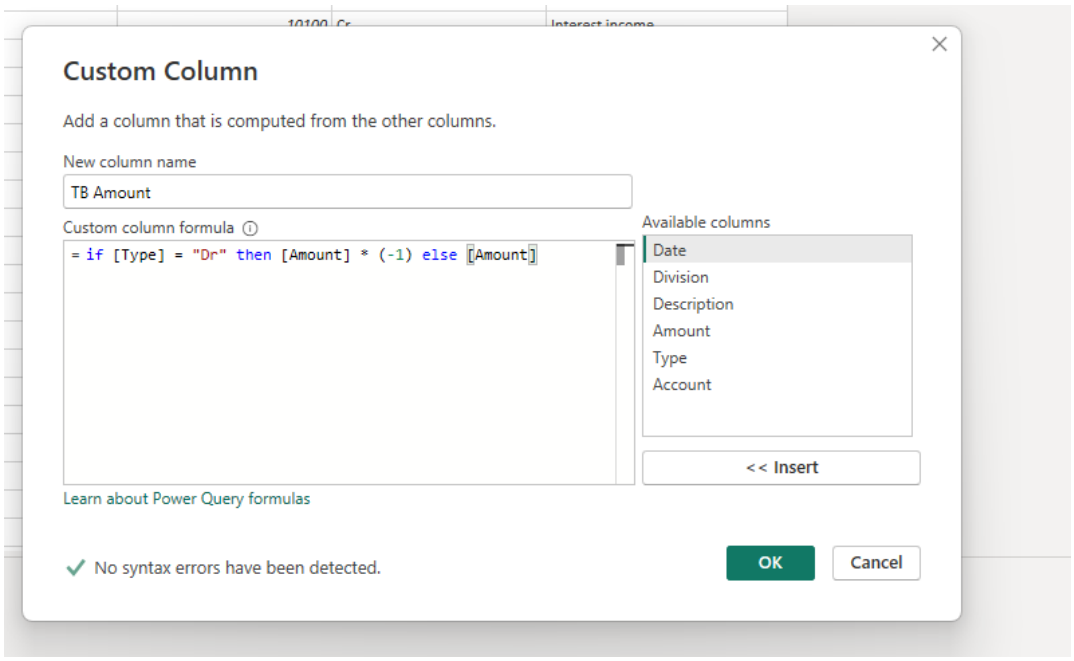
2. ETL procesas (duomenų paruošimas) su Power Query

- Nusikrauname duomeni į Power BI ir pradedame ETL procesą.

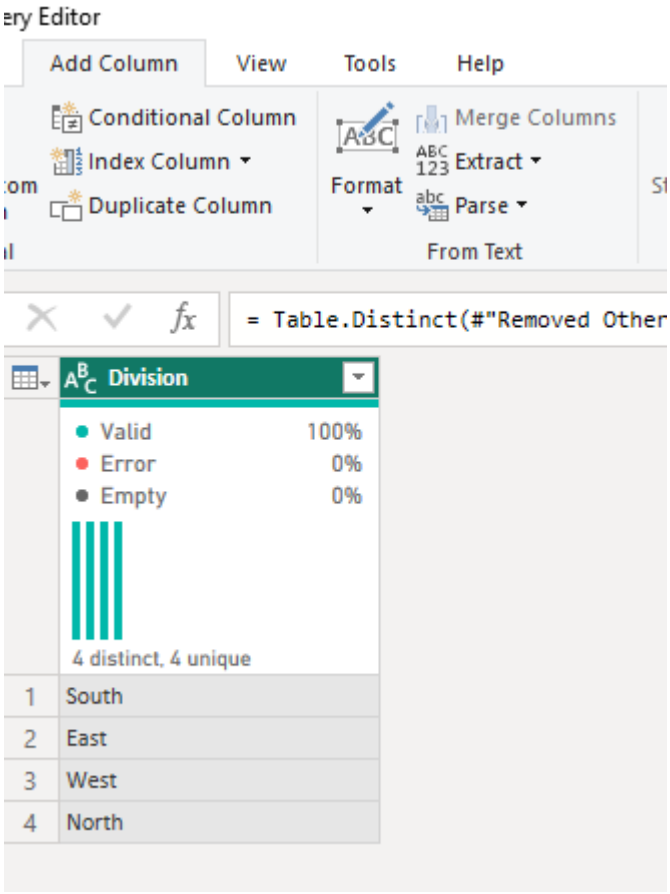


- Pakeičiame formatą taip jog debetai eitų po kreditais bei taip pat padauginam kreditus iš -1 tam, jog po to sudarinėjant ataskaitą galėtume sutikrinti balansą.

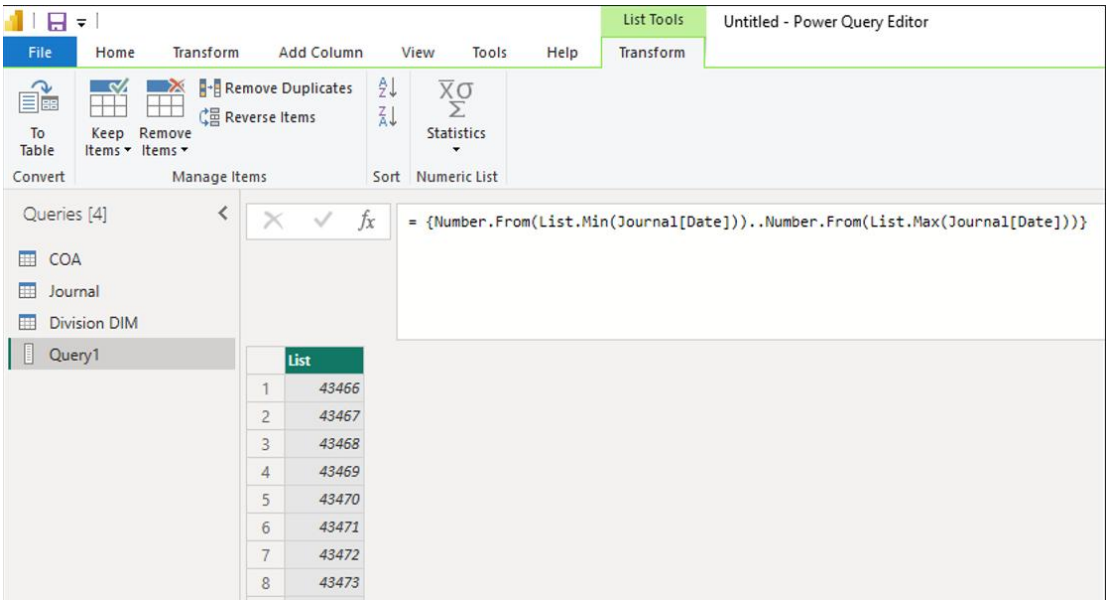




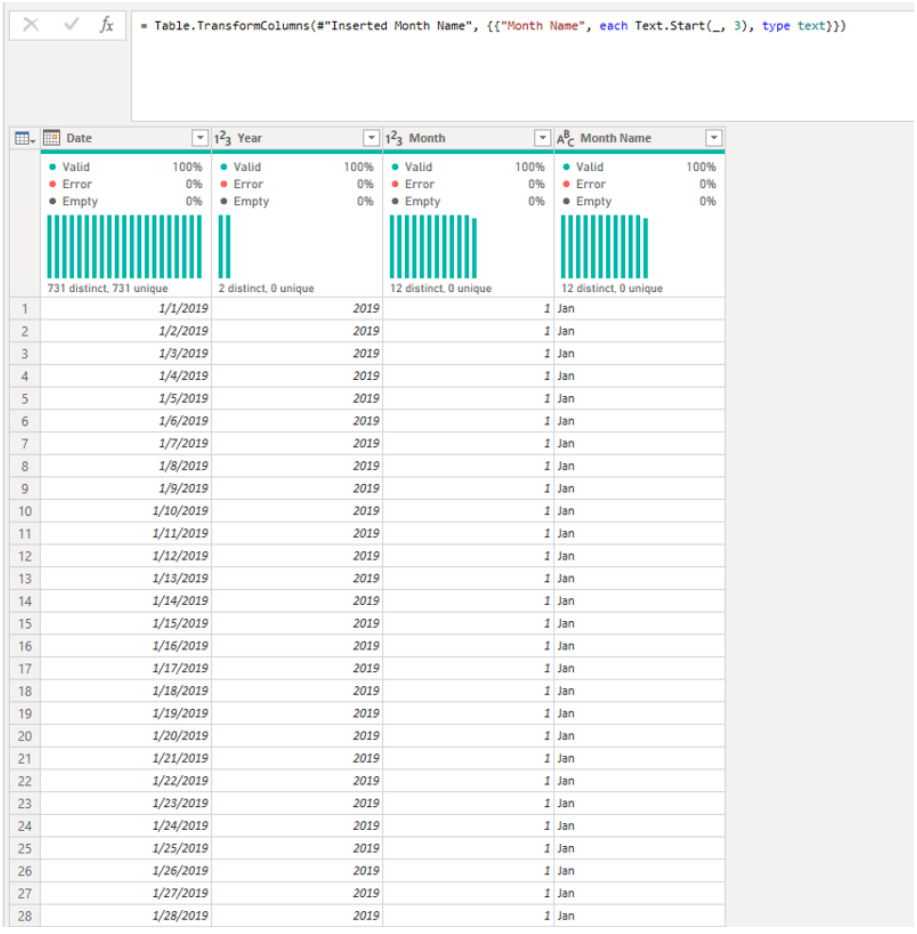
- Sutvarkę debetu ir kreditų eigą, pereiname prie įmonės regioninio pasiskirstymo ir sukuriam atskirą dimensinę lentelę (DIM) kuri būtų kaip papildomi duomenys.



- Toliau pereinam prie laiko dimensinės lentelės, kuria taip pat sukuriam iš žurnalo lentelės, tačiau pradžioj kad duomenys būtų neiškraipyti perkeičiam juos į Excel serijinius numerius.

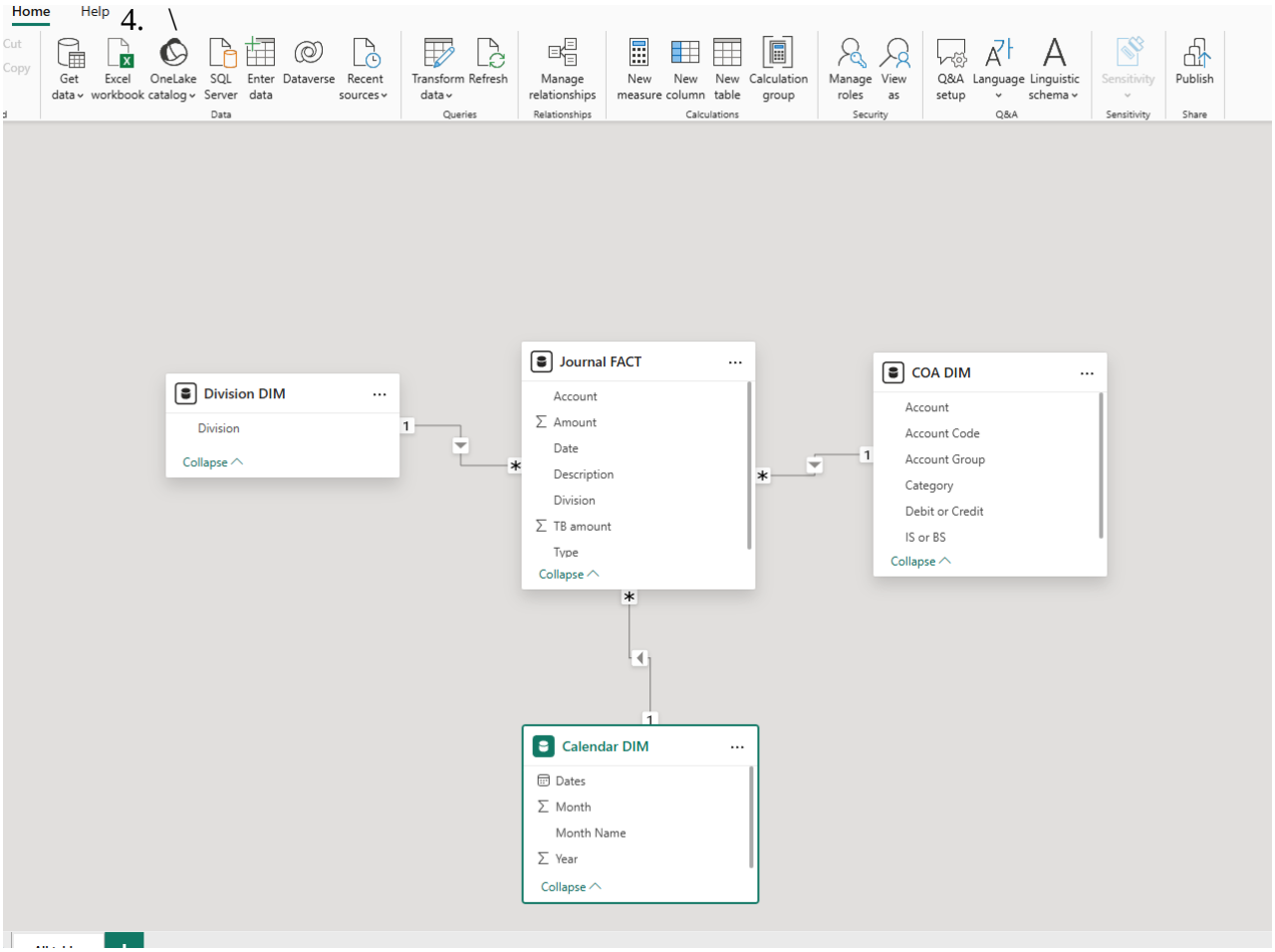


- Sukurę lentelę, suformatuojam serijinius numerius į datas.



3. Iš gautų lentelių sudarom duomenų modelį pasitelkiant žvaigdžių schema.

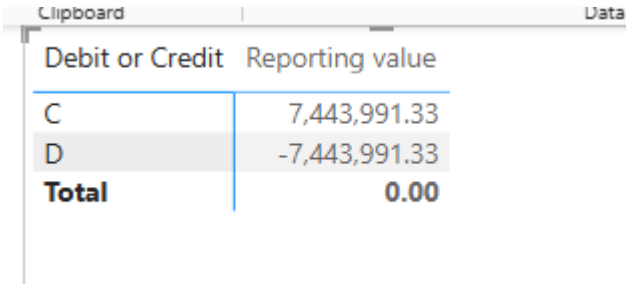
4. \



Division DIM (sukurta) – regionu lentelė
COA DIM – sąskaitų plano lentelė
Calendar DIM (sukurta) – kalendoriaus lentelė
Journal FACT – pagrindinė operacijų lentelė iš kurių bus daromas raportas

5. Measures ir DAX panaudojimas raporto kūrimui.

- Visų pirma patikriname, jog debetai būtų lygus kreditam prieš sukuriant atskirus duomenis.



Debit or Credit	Reporting value
C	7,443,991.33
D	-7,443,991.33
Total	**0.00**

- Sukuriame Pajamų (nuostolių) ataskaitos measures.

```
1  Revenue = CALCULATE([Reporting value], 'COA DIM'[Category] = "Revenue")
```

```
1  Cost of Goods Sold =
2  CALCULATE(
3      [Reporting Value],
4      'COA DIM'[Category] = "Cost of Goods Sold"
5  )
```

Asset
Cost of Goo
Expenses

```
1  Gross Profit = [Revenue] + [Cost of Goods Sold]
```

Structure Formatting Properties

```
1  Expenses = CALCULATE([Reporting Value],'COA DIM'[Category] = "Expenses")
```

```
1  EBIT = [Gross Profit] + [Expenses]
```

```
1  Finance Costs = CALCULATE([Reporting Value],'COA DIM'[Category] = "Finance Costs")
```

Structure Formatting

```
1  Net Income before Taxes = [EBIT] - [Finance Costs]
```

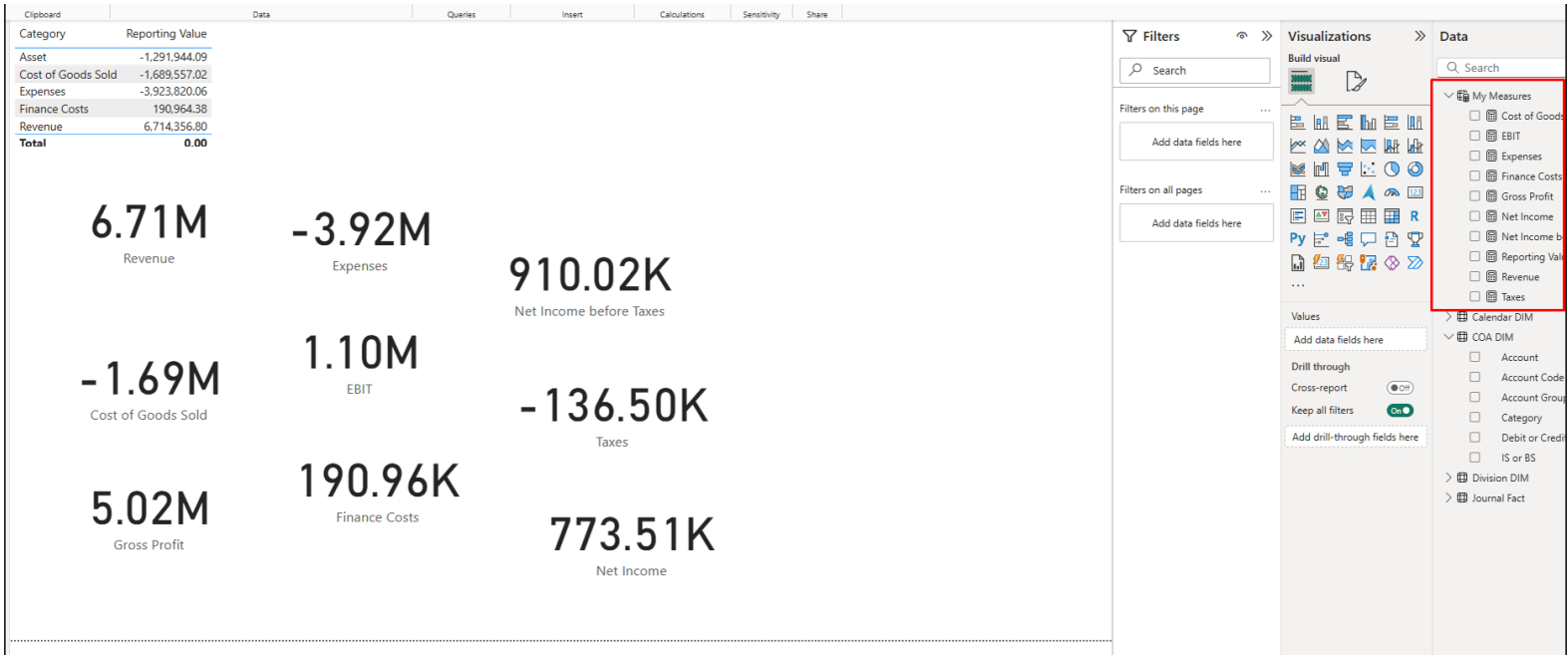
```
1  Taxes = IF([Net Income before Taxes]>0,-[Net Income before Taxes]*0.15,0)
```

Structure Formatting Properties

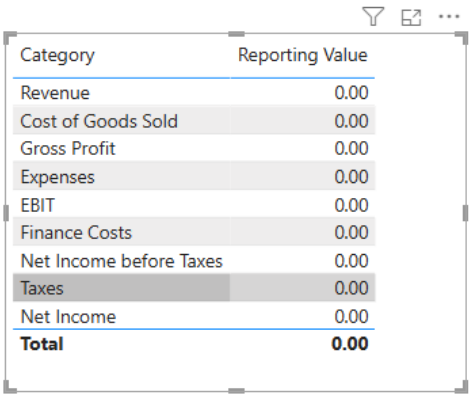
```
1  Net Income before Taxes = [EBIT] - [Finance Costs]
```

Asset	-1,291,944.09

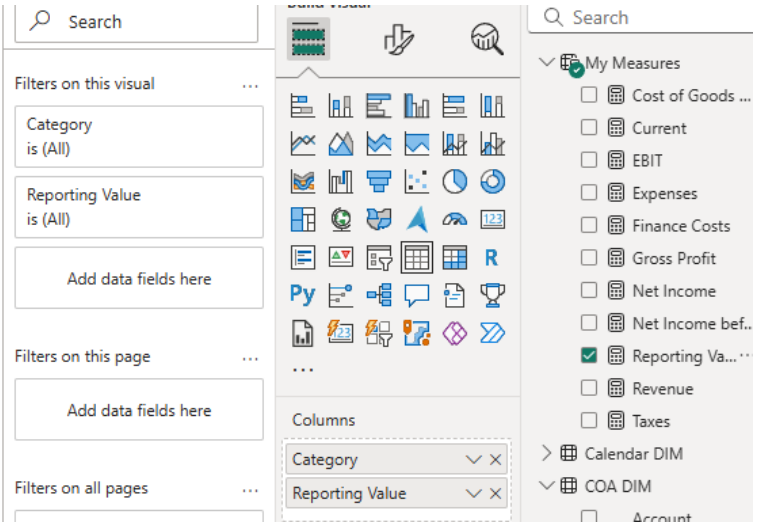
- Sutikrinam ar duomenys gerai suskaičiuoti.



6. Sudarome pajamų (nuostolių) ataskaitą.



Category	Reporting Value
Revenue	0.00
Cost of Goods Sold	0.00
Gross Profit	0.00
Expenses	0.00
EBIT	0.00
Finance Costs	0.00
Net Income before Taxes	0.00
Taxes	0.00
Net Income	0.00
Total	**0.00**



- Įdedam duomenis iš 2020 metų ir pervadinam tai į dabartinį periodą (Current).

```
Current =
VAR CurrentCategory = SELECTEDVALUE(Layout[Category])

VAR Amount =
    SWITCH(TRUE(),
        CurrentCategory = "Revenue", [Revenue],
        CurrentCategory = "Cost of Goods Sold", [Cost of Goods Sold],
        CurrentCategory = "Gross Profit", [Gross Profit],
        CurrentCategory = "Expenses", [Expenses],
        CurrentCategory = "EBIT", [EBIT],
        CurrentCategory = "Finance Costs", [Finance Costs],
        CurrentCategory = "Net Income before Taxes", [Net Income before Taxes],
        CurrentCategory = "Taxes", [Taxes],
        CurrentCategory = "Net Income", [Net Income]
    )

RETURN
    Amount
```

Category	Current
Revenue	6,714,356.80
Cost of Goods Sold	-1,689,557.02
Gross Profit	5,024,799.77
Expenses	-3,923,820.06
EBIT	1,100,979.71
Finance Costs	190,964.38
Net Income before Taxes	910,015.33
Taxes	-136,502.30
Net Income	773,513.03
Total	

- Įdedam duomenis iš 2019 metų ir pervadinam tai į praeitų metų periodą (Previous).

```
1  Previous = CALCULATE([Current],SAMEPERIODLASTYEAR('Calendar DIM'[Date]))
```

Category	Current	Previous
Revenue	6,714,356.80	3,343,866.70
Cost of Goods Sold	-1,689,557.02	-794,783.66
Gross Profit	5,024,799.77	2,549,083.04
Expenses	-3,923,820.06	-1,914,585.25
EBIT	1,100,979.71	634,497.79
Finance Costs	190,964.38	143,056.98
Net Income before Taxes	910,015.33	491,440.81
Taxes	-136,502.30	-73,716.12
Net Income	773,513.03	417,724.69
Total		

- Suskaičiuojam pokytį tarp abiejų metų (change).

```
1 %Δ (change) = DIVIDE([Current] - [Previous], ABS([Previous]),0)
```

Year

2019 | 2020

Category	Current	Previous	%Δ (change)
Revenue	3,370,490.10	3,343,866.70	0.80%
Cost of Goods Sold	-894,773.36	-794,783.66	-12.58%
Gross Profit	2,475,716.73	2,549,083.04	-2.88%
Expenses	-2,009,234.81	-1,914,585.25	-4.94%
EBIT	466,481.92	634,497.79	-26.48%
Finance Costs	47,907.39	143,056.98	-66.51%
Net Income before Taxes	418,574.52	491,440.81	-14.83%
Taxes	-62,786.18	-73,716.12	14.83%
Net Income	355,788.35	417,724.69	-14.83%
Total			

- Sutvarkom formatą bei dizainą.

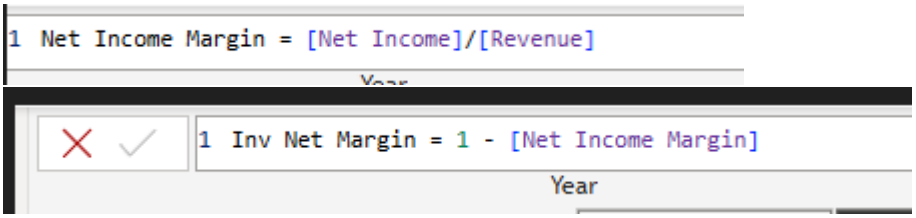
Year

2019 | 2020

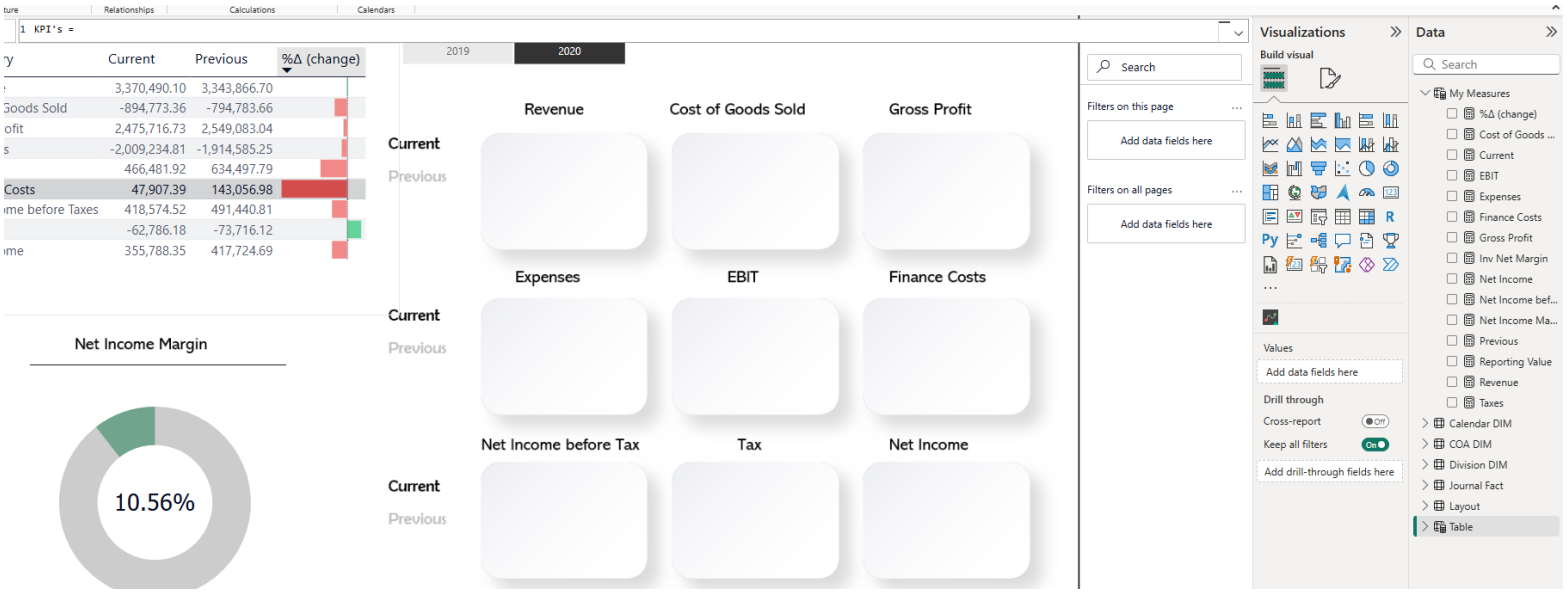
Category	Current	Previous	%Δ (change)
Revenue	3,370,490.10	3,343,866.70	
Cost of Goods Sold	-894,773.36	-794,783.66	
Gross Profit	2,475,716.73	2,549,083.04	
Expenses	-2,009,234.81	-1,914,585.25	
EBIT	466,481.92	634,497.79	
Finance Costs	47,907.39	143,056.98	
Net Income before Taxes	418,574.52	491,440.81	
Taxes	-62,786.18	-73,716.12	
Net Income	355,788.35	417,724.69	

7. Sudarome Grynojo pelno maržos diagramą.

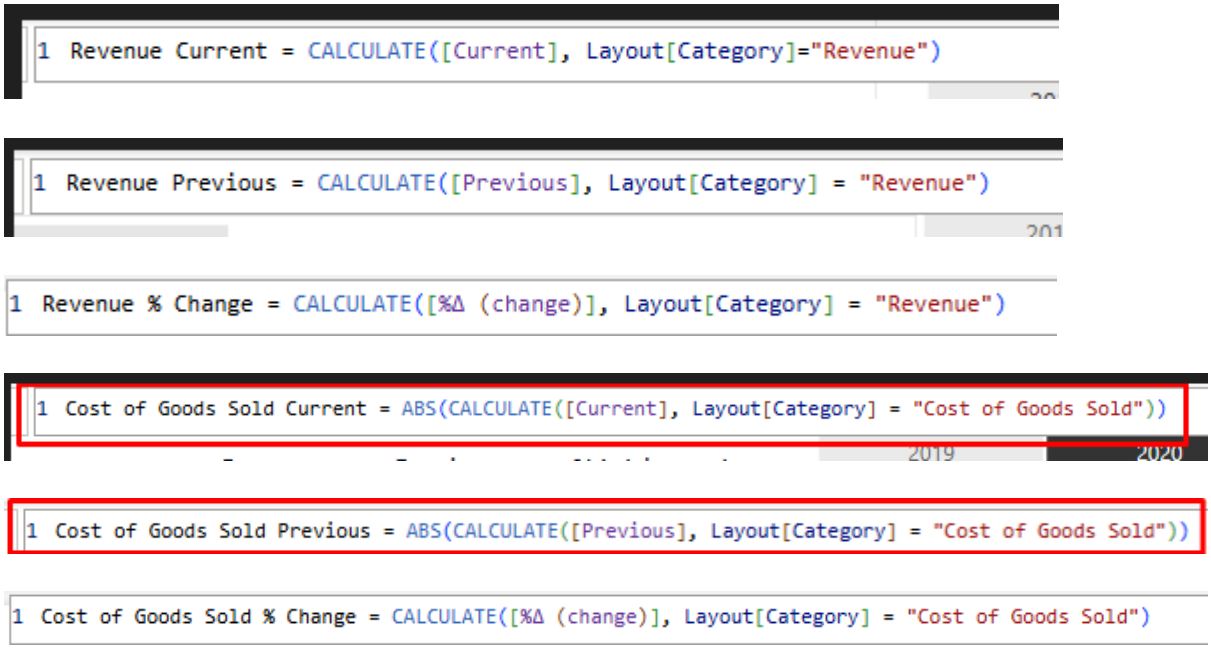
- Sukuriam naujus measures.



- Sukuriame diagramą bei taip pat įdedam nauja formatą ataskaitos rodikliams.

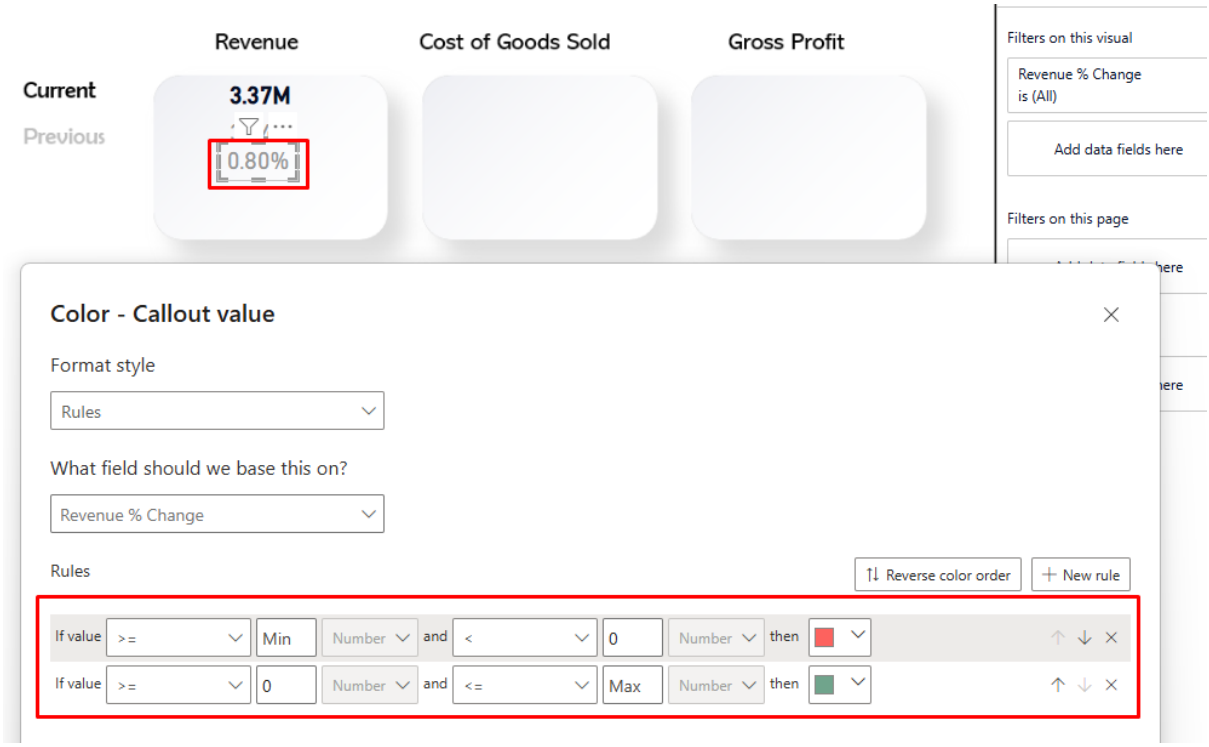


8. Sukuriam naujus Measures naujiems duomenims.

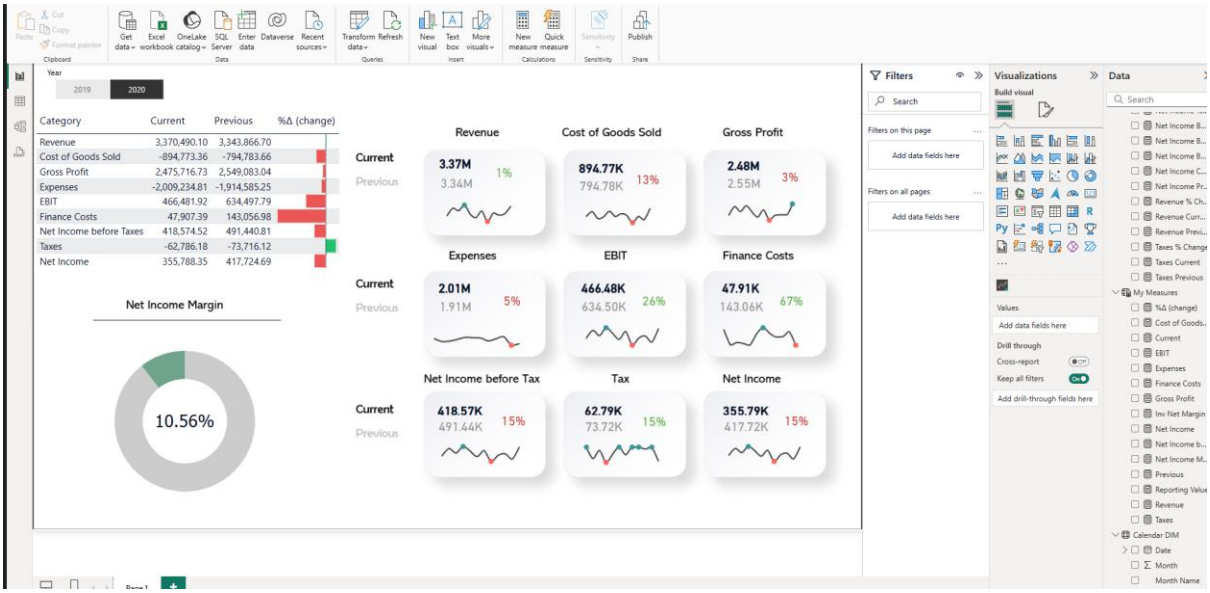


- Lygiai tokių pačiu principu sukuriam ir kitiems rodiklius naujus measures.

- Ir taip pat sukuriame vizualizacinę kreivę, tam jog matyti bendrą įmonės paveikslą.



- Galutinis rodiklių rezultatas:



9. Sudedame filtrus kurie leistų atskirti informaciją pagal kiekvieną apskaitinį mėnesio periodą, bei pagal regionus ir taip užbaigiame raportą.