

## Using .melt() for stocks vs bond performance - Corrected

The screenshot shows a web browser window with the URL `campus.datacamp.com/courses/joining-data-with-pandas/merging-ordered-and-time-series-data?ex=15`. The page displays an exercise titled "Using .melt() for stocks vs bond performance". The instructions on the left describe the task: using `.melt()` on `ten_yr`, filtering with `.query()`, merging with `bond_perc`, and plotting the result. On the right, a code editor shows the following Python code:

```
1 # Use melt on ten_yr, unpivot everything besides the metric column
2 bond_perc = ____
3
4 # Use query on bond_perc to select only the rows where metric=close
5 bond_perc_close = ____
6
7 # Merge (ordered) dji and bond_perc_close on date with an inner join
8 dji_bond = ____
9
10
11 # Plot only the close_dji and close_bond columns
12 dji_bond.plot(____, x='date', rot=45)
13 plt.show()
```

Below the code editor is a "Python Shell" window showing the output `In [1]:`. The browser's taskbar at the bottom shows the date as 04/12/2024.

### Question:

It is widely acknowledged that the price of bonds is inversely related to the price of stocks. In this exercise, you'll review many of the topics in this chapter to confirm this. You have been given a table of percent changes of the US 10-year treasury bond price. It is in a wide format where there is a separate column for each metric. You will need to use the `.melt()` method to reshape this table, filter rows using `.query()`, and merge it with a table of the percent change of the Dow Jones Industrial stock index price. Finally, you will plot the data.

### Answer:

```
# Use melt on ten_yr, unpivot everything besides the metric column
bond_perc = ten_yr.melt(
    id_vars='metric',
    var_name='date',
    value_name='close'
)
```

```
# Use query on bond_perc to select only the rows where metric=close
bond_perc_close = bond_perc.query('metric == "close"')
```

```
# Merge (ordered) dji and bond_perc_close on date with an inner join
dow_bond = pd.merge_ordered(
    dji, bond_perc_close,
    on='date',
    suffixes=('_dow', '_bond'),
    how='inner' # Make sure to specify the join type
)

# Plot only the close_dow and close_bond columns
dow_bond.plot(
    y=['close_dow', 'close_bond'],
    x='date',
    rot=90
)
plt.show()
```