

APM466/MAT1856
Assignment 2

Prof. Luis Seco, due April 10, 2024; no late penalties until April 15

Select a Canadian company, which has both historical stock prices as well as bond prices available on a given day.

- Use the Merton/KMV model to calculate the default probability of that company over time.
- Use a CreditMetrics-type model to calculate the default probability of that company over time.

Present the results of your work, presentation style, on a single sheet, ensuring that you cover:

- Which data was used
- The results, presented visually
- Any highlights of your technical work that you consider relevant.

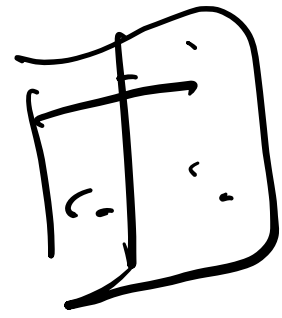
The assignment will be marked taking into account the presentation values of your work; the technical component will be evaluated only from the information presented. You will have to carefully select the salient points of your technical work, to ensure that only information which is truly needed is given, not to undermine the presentation qualities of your single page.

A rough sample of what your presentation could look like the sketch attached.

My CANADIAN Co. [MCC]

Credit Risk Analysis

MCC Bond



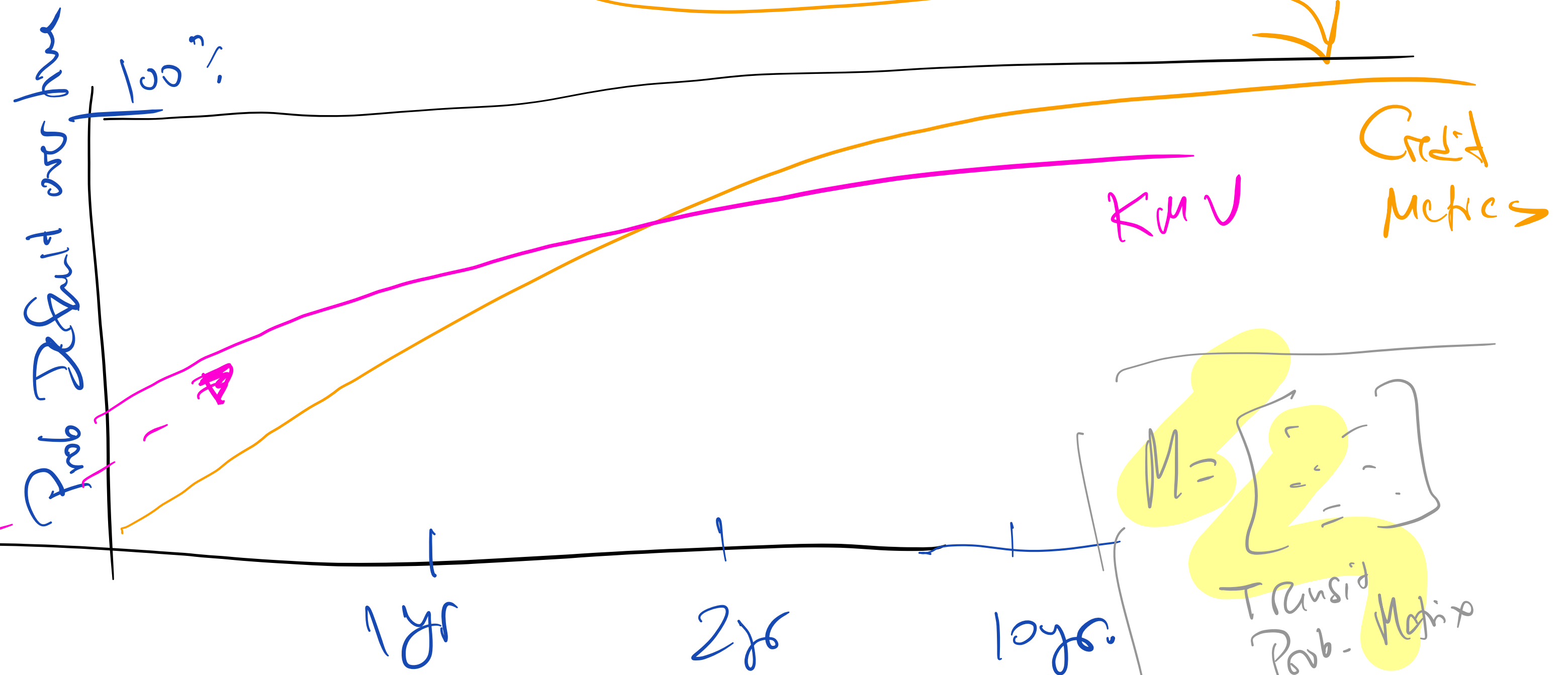
CREDIT METRICS MODEL ASSUMPTIONS

Recovery rate = 50%
2 Market States

MCC Stock

DS	40%
GA	15%
SA	5 Bn
L	3 Bn
Wkly	30%

Merton Model Parameters



$$M = \begin{bmatrix} - & - & - \\ - & - & - \\ - & - & - \end{bmatrix}$$

Transid Prob. Matrix