MTH490 Directed Study: Final Report

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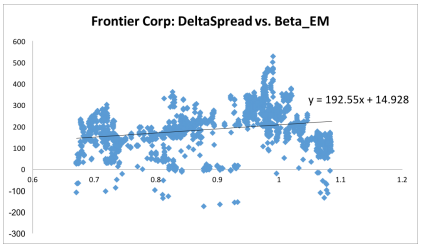
April 17th, 2017

To begin the semester, I was given a variety of Excel documents containing financial data for multiple companies from approximately 2001 to 2016. The files contained Equity, Liability, Volatility, and Physical Spread (proxied by ...) data as well as observed bond-to-market Betas.

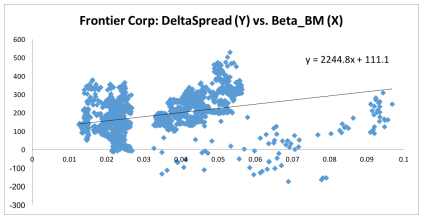
The following are pictures taken for a few different companies that we have so far. The companies analyzed are those indicated by the title. This article simply goes displays each of the figures... I figured I could show off some LaTeX skill too. In the next week or so, I'll be doing the same analysis for a few more companies.

1 Frontier Corp

Below are the figures for *Frontier Corp.* Figures 1a and 1b show the $\Delta S_{t,T}$ vs $\beta_{E,M}$ and $\Delta S_{t,T}$ vs $\beta_{B,M}$, respectively, for *Frontier Corp.* Figures 2a and 2b show the Loss Given Default (LGD) and Default Probability (PD) vs. $\beta_{E,M}$, respectively.

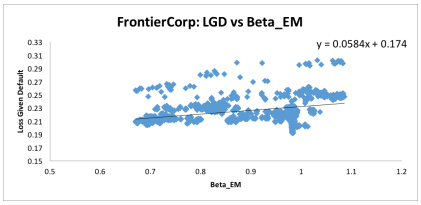


(a)

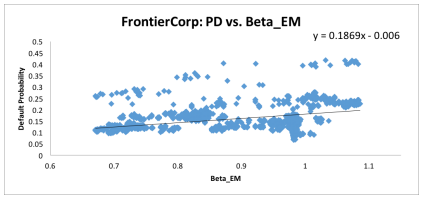


(b)

Figure 1: *Frontier Corp*: (1a) $\Delta S_{t,T}$ vs. $\beta_{E,M}$ and (1b) $\Delta S_{t,T}$ vs. $\beta_{B,M}$



(a)

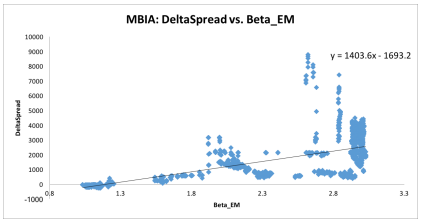


(b)

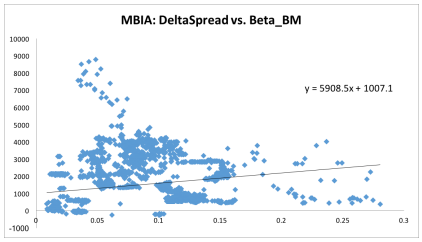
Figure 2: *Frontier Corp*: (2a) LGD vs. $\beta_{E,M}$ and (2b) PD vs. $\beta_{B,M}$

2 MBIA Insurance Corp.

Below are the figures for *MBIA Insurance Corp.* Figure 2a and 2b show the $\Delta S_{t,T}$ vs $\beta_{E,M}$ and $\Delta S_{t,T}$ vs $\beta_{B,M}$, respectively, for *MBIA Insurance Corp.* Figures 2a and 2b show the LGD and PD vs. $\beta_{E,M}$, respectively.

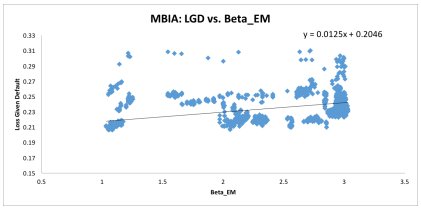


(a)

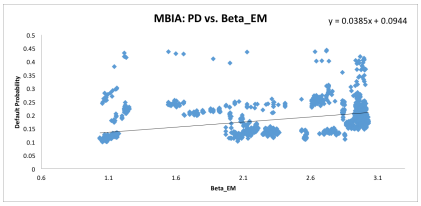


(b)

Figure 3: *MBIA Insurance Corp.*: (3a) $\Delta S_{t,T}$ vs. $\beta_{E,M}$ and (3b) $\Delta S_{t,T}$ vs. $\beta_{B,M}$



(a)

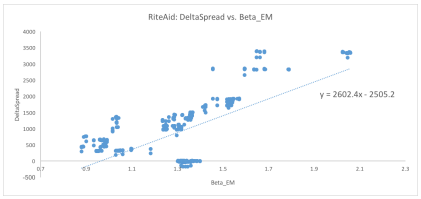


(b)

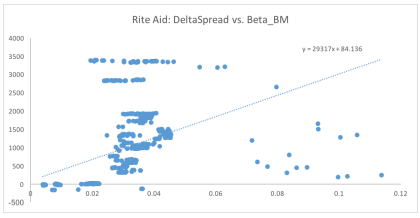
Figure 4: *MBIA Insurance Corp*: (4a) LGD vs. $\beta_{E,M}$ and (4b) PD vs. $\beta_{B,M}$

3 Rite Aid

Below are the figures for *Rite Aid*. Figure 5a and 5b show the $\Delta S_{t,T}$ vs $\beta_{E,M}$ and $\Delta S_{t,T}$ vs $\beta_{B,M}$, respectively, for *Rite Aid*. Figures 6a and 6b show the LGD and PD vs. $\beta_{E,M}$, respectively.

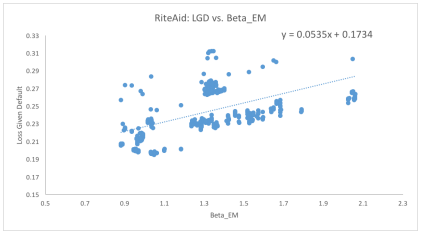


(a) 3a

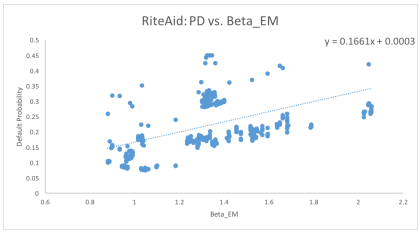


(b) 3b

Figure 5: *Rite Aid*: (3a) $\Delta S_{t,T}$ vs. $\beta_{E,M}$ and (3b) $\Delta S_{t,T}$ vs. $\beta_{B,M}$



(a)



(b)

Figure 6: *Rite Aid*: (3a) $\Delta S_{t,T}$ vs. $\beta_{E,M}$ and (3b) $\Delta S_{t,T}$ vs. $\beta_{B,M}$

Please tell me what you think when you look over these. In case the

images are too small here, I've attached them along with this file in a folder for you.